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### AN ACCOUNT OF AN EPIDEMIC OF DIPHTHERIA.

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This epidemic occurred during the months of July, August, September, and October, in a farming country in the vicinity of the city of Milwaukee. The extent of country over which it prevailed occupies about three square miles, which includes parts of the townships of East and West Granville and Menomonee, containing a population approximating 800 souls. The country is pleasingly undulating, and equally divided between cultivated and timber land. It is watered by two small rivers, and on many of the farms there are springs, with smaller streams flowing from them. The soil is of the lime-stone formation, with a loose sub-soil favorable to the easy penetration of water. There having been but little rain during the spring and summer, the rivers were lower than usual, and many of the smaller streams had completely disappeared. The wet meadows, and one or two swamps in the affected locality, usually supplied with water from springs, were dry. As for the climate of this region and neighborhood, we will simply state, that the summers are short and cool, vegetation is never exposed to a burning sun, so favorable, according to some theorists, to the creation of epidemic causes. The winters are long and cold, but the atmosphere is dry; these facts giving to Wisconsin the universal reputation of being one of the most healthy regions in the states. The townships which suffered from this epidemic, have been free from epidemics for several years. Scarlet fevers prevailed to some extent, and with more

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\* This epidemic occurred in the practice of Dr. S. S. Clark, of Menomonee. Having a large circuit to ride, and being unable to attend to this sudden increase of practice, he requested my aid. Thus was I enabled to watch the progress of the epidemic. I am indebted to him, also, for his assistance in this article, as I have gathered many facts from his notes and cases.

than their ordinary mortality five years ago. The diseases of this neighborhood have been such as are incident to any similar community, with the exception, perhaps, of occasional seasons when malarious influences would stamp the character of prevailing diseases. The year preceding the epidemic was a remarkably healthy one, and less malarious diseases than usual, though these have been steadily declining for some years.

This district is almost entirely settled by Pennsylvania Germans, well off in worldly goods. They live in well built and comfortable farm houses, and compared with foreign settlers are more cleanly in their household arrangements, and pay stricter attention to domestic hygiene. The adults are strong and robust, the children generally fine looking and healthy.

This epidemic, as we have already said, commenced in July, and ended in the latter part of October. It seemed to have arrived at the height of its violence about the middle of August, it then abated, and in September it appeared to have entirely ceased; but in October it broke out again with increased severity, thirty-five being seized in the short space of three days. The morbid agency ceased to act as suddenly as it began the second time, and in November it had entirely disappeared.

There were 133 persons attacked, 26 adults and 107 children. The majority of cases were between the ages of 2 and 10. Of the adults there was one aged 63. There were but four deaths, all occurring in children aged 3, 5, 8 and 10. Three of the fatal cases occurred in the same family, and were the first attacked; the fourth was the first case after the interval of repose of the epidemic influence. Two died from a rapid and extreme prostration; in one of these the pharyngeal inflammation terminated in gangrene; one died three weeks after all traces of the local affection had disappeared, suffering at the time with intense anæmia and paralysis of the lower extremities, and the fourth died with croupal symptoms. In describing this epidemic, we will simply give its general features, as individual cases would not furnish sufficient variety to be interesting. Those cases, however, which illustrate certain special phenomena bearing upon disputed points in diagnosis and pathology, will be mentioned.

The symptoms of this disease have been so faithfully given by Bretonneau, that his description would suit the characteristics of epidemics as witnessed in France, but that his observations did not take in the whole disease is evident from what subsequent observers have accomplished. The general law which governed epidemics of his day are the same to day, though there have been variations in its expression, doubtless dependent upon local influences, such as geographical position,

climate, etc., and it is from the sum of these differences, so to speak, that we can arrive at any true conclusion as to its nature. Owing to a loose and extended nomenclature of this disease, observers have fallen into errors, some denying its specific character, others claiming its identity with other diseases, others still, that it is a disease *suigeneris*; and the consequent confusion in their descriptions of epidemics, not only detracts from the value of their observations, but it impedes progress in the investigations of others. Careful and faithful records of different epidemics can alone bring order out of this confusion. By a close attention to the symptoms are we made acquainted with the laws of the disease, and thus will be enabled to distinguish it by a name which can never be misapplied. We shall, therefore, confine ourselves to those phenomena as they appeared to us during this epidemic, saving such reflections and conclusions arrived at for that part of our article under the head of remarks.

*Symptoms.*—There was no uniformity in its manner of access. The prodromata, using the term in its usual signification, those symptoms existing before the formation of the false membrane, when they exist were from one to several days duration. These though common at the onset of many diseases, should arouse the suspicion of the practitioner when he meets with them during the prevalence of an epidemic of diphtheria. These are, a chill, headache, a febrile condition, hot skin, tongue coated, loss of appetite, nausea, vomiting, a feeling of malaise, a slight soreness of the throat, some difficulty in deglutition, and on examination of the fauces a more or less redness of the mucous membrane. These symptoms varied in their appearance and intensity in different cases; in some they were so slight as to attract but little attention; in others they were so severe as to confine the patient to bed for several days before the appearance of the false membrane. In several instances they seemed to constitute the whole disease; repeated and most careful examinations of the fauces and cutaneous surface revealed no membranous exudation. Again, the false membrane was in some cases the first indication of the disease.

*Symptoms referable to the Throat.*—In some cases pain was complained of only during the act of deglutition, in others it was constant and severe, but this symptom bore no relation to the severity of the local affection. The mucous membrane more or less congested, but in no instance could we discover the peculiar ecchymotic and striated appearance described by Bretonneau and other authors. The tonsils in some cases were tumefied, so much so at times as to form a serious complication; any considerable degree of tumefaction however was an exception. The adventitious membrane generally made its appear-

ance on the second or third day—in a few instances as late as fifth or sixth day—and this if not checked would rapidly spread; in but one instance did it pass to the air passages producing croupal symptoms, the case proved fatal.

*False Membrane.*—This would vary in its locality of first appearance, usually however it was first discovered on one of the tonsils, rarely on both at the same time. In some it commenced by small white spots which would soon unite forming a continuous sheet, in others a patch of size would be developed in a few hours. Once formed, its tendency was to spread, and unless arrested, one or both tonsils with their pillars and the soft palate would be invaded. The pharynx was its exceptional seat. Occasionally it was seen in and about the external openings of the nares, but in most of these cases there existed a herpes or eczema. Its color and thickness would vary in different cases, and according to the length of time it remained undisturbed upon the mucous membrane. Sometimes it was white, resembling a thin layer of mucus, at other times it was yellow, which, on a congested and perhaps tumefied surface, put on the appearance of an ulcer. Again it was gray or ash-colored, which with a foetid odor might be mistaken for commencing gangrene. The false membrane was more or less adherent to the subjacent mucous surface; at times it was easily detached, leaving the mucous membrane in its integrity; at others its removal would be followed by some bleeding, revealing a slight erosion. Once detached it was soon reproduced, and this removal and reproduction would in many cases be repeated for several days before it disappeared, which took place as early as the second and as late as the fourteenth day. The peculiar characteristics of this membrane have received such minute descriptions from authors, that we will not repeat here what our readers may already know. The question as to whether it is situated between the mucous membrane and the epithelial layer, its chemical composition and microscopical appearances have but little value to the practical physician, as there are other more certain and ready means of diagnosis. That the false membrane has an erosive or irritating property, is exemplified by the following case:

*Case.*—Girl aged 7 years, was attacked with a mild form of diphtheria. The local symptoms yielded readily to treatment, so that on the third day there remained but a small patch of the false membrane about the size of a half dime on the left tonsil. Wishing to watch the process of spontaneous detachment we left it undisturbed. On the morrow it had increased in extent, and on the third day it covered nearly the whole



tonsil, and the cervical glands had notably increased in volume. Deeming it imprudent to let it remain, it was carefully detached with the forceps and an ulcer was discovered on the tonsil corresponding to that portion of the false membrane which had remained the longest. The local application of the sesquichloride of iron, and this remedy with chlorate of potash soon produced cure. Although the tumefaction of the cervical glands existed in every instance, yet we think that their rapid increase in volume being coincident with the existence of an ulcer in this case, will illustrate that dependency between this enlargement and the absorption of some irritating or poisonous secretion. This relation is analogous to what is seen in other diseases, as between a chancre and bubo, and between enlarged mesenteric glands and ulcerated peyer's glands. The existence of the ulcer we are inclined to believe depended upon the long continuance of the false membrane upon the mucous surface, as the same lesion was noticed in another case where the exudation had evidently existed some days before we saw the case. May not the infrequency of ulceration depend in *some measure* upon the local treatment now generally adopted and so necessary in the management of the local symptoms?

*Gangrene.*—This occurred but in one instance, and this was the first case and first victim of the epidemic. The following is the case as related to us by Dr. Clark:

*Case.*—A boy 10 years of age, had been sick for six or seven days before I was called. He was already in an alarming condition, there was great prostration, his face œdematous and of a cachectic leaden hue, pulse quick and feeble, a complete inability to swallow, a quickened but not efficient respiration, breath fetid, and sides of the neck swollen, and a fetid diarrhœa. On examination of the throat there was discovered a loss of substance of both tonsils. They were excavated, presenting a bloody and greenish appearance, and numerous shreds of filaments of the fauces presented a dirty ash color, and the odor was not to be mistaken, so characteristic was it of gangrene. From the general condition of the patient, the extensive local ravages of the disease, and the loss of the power of deglutition, I at once pronounced the case fatal. My best directed treatment had no influence on the gangrenous destruction of the parts, and on the fourth day the patient died with almost a total destruction of both tonsils, the uvula and part of the soft palate; the whole of the fauces appearing as a continuous gangrenous ulcer. I was in doubt as to the nature of this disease, so rapid and malignant was it in its progress, until the day before his death when another of the family was taken sick, bearing the unmistakable marks of diphtheria. The

disease ran rapidly through the family, four children, mother and domestic, sparing the father. We will refer to this case hereafter.

*Lymphatic glands of the neck.*—A tumefaction of these glands always accompanied the inflammation of the throat. This was a constant symptom, and was most manifest on the side where the throat was mostly inflamed or the false membrane most extensive. In a few instances this tumefaction of the glands existed before the exudation was detected, but this latter did not delay to make its appearance. But in these cases, it is possible that it may have existed, and became detached by coughing or in the effort of deglutition prior to examination. This glandular swelling would remain for a variable length of time after the disappearance of the false membrane; in no instance did suppuration supervene, a fact noticed by some observers.

*Fever.*—The febrile symptoms varied greatly in different cases. These seemed to be governed more by constitutional peculiarities rather than by the severity of the disease; ordinarily, however, they were but slight. In some cases during the whole course of the disease, the febrile movement would be scarcely appreciable, in others it would be more or less intense from the beginning.

*The Tongue* was almost invariable in its appearance. It presented a dirty white or cream colored coating, through which the enlarged and red papilla projected, giving the organ a very peculiar appearance.

*A want of Appetite* was one of the most constant and troublesome symptoms, often amounting to a *great disgust* for food. In many instances this would continue not only during the activity of the disease, but also during convalescence, baffling every attempt on our part in the administration of remedies, and the ingenuity of parents in the preparation of dishes to excite it.

*Voice.*—In many cases there was a marked alteration in the voice, it having a decided "nasal twang," nothing in common however, with the hoarse and whispering voice of croup. This did not depend upon obstruction of the posterior nares by any tumefaction of the parts, but it could be referred to a paralysis of the soft palate.

*Cough.*—This when present, was neither violent nor paroxysmal, but short and expulsive, as if to free the throat from some irritating substance.

*Albumine in the Urine.*—Albumine was present in the urine of some of the cases examined; quite abundant in one of the fatal cases. Knowing the importance of this symptom

in other diseases, we regret that we did not carry our investigations so far that they might be of some practical value. The fact, however, that it was not constant in all of the *few* cases examined, is sufficient to demand for this symptom a more careful appreciation in future observations.

*Symptoms referable to the cutaneous surface.*—The skin presented but one important symptom, and this was the false membranous exudation. The following case will illustrate the importance of this symptom.

*Case.*—In a family of five children two were confined to bed with diphtheria. At one of our visits we noticed a third, a boy aged 8 years, with a pale countenance, a coated tongue. He complained of a loss of appetite, head-ache, and had vomited twice during the twenty-four hours. On examination we found the fauces slightly inflamed; absence of false membrane, and no tumefaction of the cervical glands. These symptoms were looked upon as prodromata, and we told the family that he was suffering from the epidemic poison. On inquiry as to whether he had any sores on his body, we learned that he had a few days previous injured his foot, and on examination we found a sore covered with a diphtheritic exudation, and the surrounding integuments had the appearance of an erysipelatous inflammation. There was now no doubt as to the cause of his indisposition. Two days after, the sore had nearly doubled in size, and on the third day the false membrane made its appearance in the throat, thus making the case pharyngo-cutaneous diphtheria, according to the universal and erroneous manner of naming this disease from one or more of its local manifestations.

This case is but a type of many met with, but in none was the exudation confined to the cutaneous surface, and here it only appeared in those parts already deprived of the epidermis, whether by disease, accident, or remedies in one case on a blistered surface.

This case conclusively illustrates that the symptom or sign which has given name to this disease, is but a local evidence of a morbid poison affecting the whole system, having a predilection however for its manifestation in the throat, and requiring certain conditions of the skin, an abrasion, ulcer, etc., for its appearance on this surface.

Besides the above, there are constitutional symptoms, which, when mentioned by authors, have been passed over with too slight a notice. In these lie the *genie* of the disease, they alone being sufficient to stamp its individuality. Too much importance has been given to local manifestations; had the same attention been given to that general condition of the system

tending to or producing their development, much of the confusion as to its specific character and pathology would have been avoided. We refer to a more or less intense anæmia, a depression of the vital powers, and to local or general paralysis. These conditions, when spoken, have been described as sequences, but that they may appear during the activity of the disease, or even constitute the only evidence of the action of the diphtheritic poison, we have indubitable testimony.

*Anæmia.*—There was a constant tendency to an anæmic condition; in some cases it was the earliest symptom noticed. It generally made its appearance early in the disease, and in some cases it would not arrive at its maximum until long after the disappearance of the false membrane. In several instances, in families where diphtheria was prevailing, cases of sudden anæmia occurred not referable to any appreciable cause, nor accompanied by the pathognomonic sign of diphtheria, but the same condition being common in well marked cases of diphtheria, we could not but conclude that it depended upon the influence of the prevailing morbid poison. The characteristics of this state are too well known that it should need a description from us, its only peculiarities in diphtheria being its occasional sudden appearance, its rapid progress, and absence of common causes.

*Nervous depression.*—This state, like the preceding, varied as to the stage of the disease in which it made its appearance, usually it was an early symptom. It was also a common symptom, but differed in its degree in different cases. This prostration of the constitutional forces bore a strong resemblance to that observed in typhoid fever; the patients, though silent, inattentive, restless, sleepless, feeble, and fatigued, did not present that stupor or delirium of typhoid. We will again speak of this state in our remarks.

*Paralysis.*—Paralysis of the soft palate was observed in many cases, the patients having a decided "nasal twang" of the voice, and more or less difficulty of pronunciation; in one or two cases this was accompanied with paralysis of the muscles of deglutition, as shown by the regurgitation of food by the nostrils in attempts to swallow.

*Hemiplegia.*—This occurred but once.

*Case.*—A boy aged 5 years, in excellent health, was attacked with diphtheria during his brother's sickness with the same. The disease passed through a mild course. The false membrane ceased to appear about the fifth day, and convalescence seemed to have been established. His appetite improved, his former playfulness returned, and he engaged in his ordinary nursery sports. In about a week we were again summoned,

and found him with a pale and puffy face, quick pulse, a distressing sensation of fatigue, loss of appetite; no soreness of the throat, no pain in deglutition, no appearance of false membrane. We attributed his present state to imprudence on part of the parents, in permitting him to play in the yard improperly clad—head uncovered and face bare—exposed to a damp atmosphere. Two days after, we found him in a profound adynamic state, the anæmia intense, face pale, of a leaden hue, and somewhat œdematous; the anæmic bruit audible over the cardiac region and in the carotids; no head-ache; the cerebral functions undisturbed. *There was a decided nasal intonation of his voice, food regurgitated by the nostrils, and on taking him out of bed we discovered that he had lost the use of his lower limbs.* Albumine quite abundant in his urine. These symptoms became more and more marked, notwithstanding our best directed energies; and he gradually sunk, and died on the sixth day of our visits, from extreme prostration.

This case, although imperfectly given, is instructive in more than one point. Here we find combined in the same patient two of the most formidable sequela of this disease, the one common and the other exceptional; and the time of their appearance shows that the cessation of medical attention and treatment should not be determined by the disappearance of the false membrane, nor by an apparently well established convalescence. We will give another case illustrative of this fact when we speak of the treatment. It also shows the error of giving too much stress to the local manifestation to the neglect of constitutional phenomena, which may constitute the only evidences of the disease. This rapid and fatal prostration may occur before special lesions are manifested.

*Duration.*—When the disease was without complications, it ran through its stages in a few days. However, there was nothing constant in this. The false membrane disappeared in some cases in two days; in others from ten to fourteen days. In cases complicated with anæmia, the convalescence was slow and long; a few still under treatment, three months from date of sickness, for this condition.

*Relapse. Case.*—A young lady, aged 19 years, was attacked during the early period of the epidemic. The disease was well characterized, pursued a mild course, and disappeared in a few days. During her sickness she was suffering from disordered catamenia, and she presented the appearance of one laboring under incipient chlorosis. This suppressed menstruation added to a mental depression caused by an *annoying disappointment*, gave such an impulse to the tendency of her diphtheritic attack to anæmia, as to demand special attention. She was put

on a tonic and chalybeate course. Four weeks after, her angina ceased, and at the time when the epidemic so suddenly increased in violence, she complained of head-ache, an increased loss of appetite, and soreness of the throat, which soon put on the distinguishing marks of diphtheria. The relapse was more severe and longer continued than the first attack. Her convalescence was incomplete, she having suffered long from paralysis of the soft palate; the only inconvenience, however, being an alteration in her voice and she is still, four months from first attack, under treatment for decided anæmia.

Whether this case should be considered as an instance of second occurrence, or whether the two attacks were but the one and same disease, the morbid poison having ceased to operate for an interval, we will not attempt to decide positively. After her first attack, or during the interval of quiet, which was also the interval of repose of the general epidemic influence, her throat resumed its healthy look, her tongue cleared, and the cervical glands resumed their normal condition; there were no traces of diphtheria, save her anæmic state, which could be ascribed to other causes. Added to these facts, the length of time between the attacks, and the sudden and violent manner of the second outbreak of the epidemic, we are inclined to regard it an instance of second occurrence, her health establishing a predisposition which yielded to the causes which renewed the force of the prevailing influence. To regard it as a case of second occurrence would not militate against the specific character of the disease. This is but what occurs in other diseases where specific character is unquestionable, as in measles, scarlet fever, small pox, typhoid fever, etc. If this were or were not a fact, it would have no weight in establishing the peculiarities of diphtheria; "these must be facts determined by experience, and not inferences determined by reasoning."

*Treatment.*—We need not dwell long on the treatment, as we claim no originality in the method pursued. Of all the internal remedies that have been recommended, we placed our chief reliance on the tincture of sesquichloride of iron, hydrochloric acid, and chlorate of potassa. These were either given together in some convenient vehicle, or in alternate doses. Occasionally, but rarely, the tincture of iron could not be borne for many successive days; in these we gave as a substitute, sulphate of quinine and citrate of iron. The doses of these remedies were full, and regulated according to the age of the patient. Emetics were given at the onset in some cases, but as they did not seem to have any effect on the severity or duration of the disease, they were discontinued, except in those cases where their mechanical aid in detaching the membrane



would be of service. When cathartics were called for, the mildest were selected; in those cases where enemata would answer, they were always preferred.

A generous diet was allowed; beef tea, mutton broth, rich chicken soup, etc., together with a more or less free use of wine, brandy, or any other stimulant at hand. We urged, and in some cases forced patients to take nourishment, notwithstanding the loss of appetite, amounting in some cases to a disgust for food, as these symptoms were no index as to the state of the digestive powers.

*Local Treatment.*—This consisted in the removal of the false membrane *with the forceps*, which, except in the youngest patients, could be easily done by devising means of keeping the mouth open and tongue down, and the subsequent application of a solution of the nitrate of silver, twenty to forty grains to the ounce, the strength varying according to the severity of local symptoms. The tincture of the sesquichloride of iron, or hydrochloric acid, were substituted for the nitrate where there was an impossibility to remove the membrane, believing that they assisted more in detaching the membrane than the nitrate; they were also used whenever there was any fetor or suspicious discoloration of the membrane. The frequency of these applications was determined by the rapidity in which the membrane was reproduced. Gargles of tannin, alum, chloride of soda, and chlorate of potass were used; the two former seemed to be useless, the latter acted undoubtedly as a solvent of the membrane; this we have frequently proved by placing portions of the membrane in a strong solution of the chlorate.

Both general and local treatment should be continued for a few days after the disappearance of the false membrane, as the following case will illustrate.

*Case.*—A boy, five years of age, had suffered from the ordinary symptoms, and was treated in the usual manner. On the fifth day all traces of the false membrane had disappeared. With general directions as to his management, and with strict injunctions that his throat should be examined daily, we left him as convalescent. Three days after we were again summoned, and found the exudation covering both tonsils and part of the soft palate. Patient slowly recovered.

Thus have we attempted to describe the progress and phenomena of this epidemic as faithfully as possible, and as minutely as is necessary. We could here conclude our article, leaving the reader to draw his own conclusions, but there are certain facts bearing upon some disputed points as to the nature of this disease, which we do not wish to pass in silence.

*Remarks.*—Every few years the attention of the medical

world is arrested by the discovery of a new disease, and our journals are gorged by writers who wish to print, to do honor to the discoverer, and to swell the importance of the strange disease.

Ever since M. Bretonneau, of Tours, published his observations on the disease, the discussions as to its nature have been continued, so that there is no disease in modern times whose literature is so rich, and we may add so confused. That the disease has not been fully understood, we may judge from the multiplicity of names it has received; perhaps there is no malady whose nomenclature is so extended and so vague. From this confusion in nomenclature and descriptions arises the opinion of some that diphtheria is of recent origin.

*Is it a new disease?* We do not intend to give more of the history of diphtheria than is necessary to answer this question. We are loath to believe in the "sudden development of strange types of disease" of new organic poisons and new contagions. The notion of a new disease springing up among the human race militates against that law of sameness observable in their economy. A first recognition and description of a malady particularly constitute its newness, but this is no proof that it has not existed in all ages. Diseases are often overlooked or confounded with others; descriptions drawn from hasty inferences; theories imperfectly conceived, and facts obscurely ascertained, pass through lengthened periods of our art, and it is the separating the dross from the metal that constitutes much of our progress. Whooping cough was not described as a separate disorder prior to Dr. Thos. Willis, and we learn from Willan that Sydenham was the first to mention scarlet fever, yet no one doubts but what these diseases existed before these observers; we only think it strange that they should have passed so long unnoticed. It is stranger still that diphtheria, terrible and destructive as it has been in some countries, should not have been recognized by the profession at large as a disease *suigeneris*, long ere Bretonneau pronounced it such.

We find in ancient and modern writers descriptions of it, as graphic and clear as that given by this noted observer. Indeed he does not claim the title of discoverer, for he traces descriptions of diphtheritic inflammation from the time of Hippocrates down to his own age. The following passages from Areteus are sufficient to show his acquaintance with this disease. "Ulcera, in tonsillis fiunt, aligna mitia, aligna pestifera, necantia. Pestifera autem sunt lata, cara, quodum concreto humore albo, livido, aut nigro sordentia. \* \* \* At si in pectus per arteriam id malum invadit, illo eodem die strangulat. Pueri usque ad pubertatem maxime hoc morbo tentantur."—(*Medico*

*Chir. Review*, new series, vol. 5, p. 427.) One cannot fail to recognize in this quotation a good description of the pathological peculiarities of diphtheria, and of the manner in which it frequently proves fatal. At a date nearer our own times, writers on this disease become more frequent; we will simply mention the names of Morton, Cullen, Cotton, and Huxham; these, however, confounded it with measles, or scarlet fever. Fothergill, in 1748, "was the first to describe as a *new and separate disorder*, that perilous form of the complaint which Cullen designates cynanche maligna, and it was long called the Fothergill sore throat."—(Watson.) About the same epoch other writers described this disease as a *primitive* affection. Among them Starr and Ghisi were the most prominent. But this step toward progress was soon lost, for we learn from the same author just quoted, "that the identity of this affection with genuine scarlet fever has been slowly established by subsequent observers!" But our countryman, Dr. Samuel Bard, who published his observations in 1771, did more than any preceding author in delineating this malady. He was the first to recognize the nature of the local lesions, and so full and just are his opinions, that subsequent authors have added but little to his description. He pointed out the connection between the angina and croup, and the manner in which the air passages were invaded by the false membrane. He gives observations of the angina alone, of croup alone, and of these diseases complicating each other, considering these, however, as identical. He gives the differential characteristics between this disease and pultaceous pharyngitis, showing that the appearance of the throat was not the result of gangrene, and regarding the false membranous patches as the result of a concretion. Bard was soon forgotten, and everything touching this disease continued vague and confused, until the distinguished Bretonneau published his researches. His delineation was so clear and minute that the disease became easily recognizable, and epidemics were observed almost simultaneously in different parts of the world. If we possessed no evidence of the antiquity of the disease, its history since Bretonneau's time would indicate that it has existed in all ages; for it would seem absurd to believe a disease of recent origin, should, so soon after his description, appear in different countries where climate, condition of the inhabitants, etc., were so diverse.

In the *London Lancet*, (article Diphtheria, April 1859, page 203,) it is stated, "one practical fact is indeed well established, that it is a disease until lately unknown to the practitioners of this country (England), and not formerly described by any of our older writers. The affections so well known and so vivid-

ly described by Fothergill, Huxham and other physicians were undoubtedly the scarlatinal angina and the angina gangrenosa, or malignant cynanche, but diphtheria is separated from them by a line of demarcation, at least as strongly distinctive as that which divides diarrhœa, dysentery and cholera." This is the tone of all the present English writers. Is the disease mentioned by any of their older authors? Dr. Starr, described an epidemic of angina maligna which raged in Cornwall in the year 1748 under the name of *Morbus Strangulatorius*. Dr. Fothergill, whose treatise on the malignant sore throat appeared in 1748 says, "that great difficulty of breathing" took place in all previously to the fatal termination. In Huxham's account of the epidemic of 1752—3 the same termination is distinctly noticed. In speaking of the expectoration of what he termed the *sloughs*, he says that a piece of the *internal membrane of the wind pipe* was discharged, meaning (the false membrane of course.) Dr. Withering says that "the affection of the fauces in some cases spread itself down the wind pipe of the lungs, as was evident from the cough, the strait breathing and other peripneumonic symptoms." In Dr. Cullen's account of the cynanche maligna, it is stated that from dissections it appears that in C. malig. the larynx and trachea are often affected in the same manner as in the C. trachealis, and it is probable that in consequence of the affection, the C. maligna often proves fatal by such a sudden suffocation as happens in perfect cynanche trachealis." (*Laennec*, American Edition, note. p. 126.) As the symptoms described by the above authors are common in fatal terminations of diphtheria, and very uncommon in scarlatinal angina and angina gangrenosa, we need not stop to show they were acquainted with this disease, though not favorably described by them. In our own country since Bara's time, the disease has been noticed and described under the names of putrid sore throat, the sore throat epidemic, malignant sore throat, scarlatina anginosa sore throat.

*The confusion arising from the fact that fatal cases have been given as types of the disease.*—From the history of epidemics as observed in France, England and elsewhere, the present would be considered as of a mild character. We attribute much of its mildness to early treatment. During the epidemic, parents would daily examine the throats of their children, and on the slightest indisposition we were summoned, so that with some exceptions we met with the disease in its forming stage. This variation in severity is observed in all epidemic diseases, and we fear that accounts of epidemics of diphtheria, as have prevailed in Europe, have been of the most malignant form. Bretonneau recognized a mild form, to which he gave the

name of "*angine couenneuse commune*," and endeavors to show that it is a bastard affection, but from the description he gives of it, we are unable to distinguish it from true diphtheria. He bases the difference in these forms upon the progress and result of the disease, if it progresses without any complication and terminates favorably, it is the "*couenneuse commune*," but if its march is rapid sequela, or death ensue, then it constitutes his *diphtherite*. We do not admit however, of this distinction, it is giving to *diphtheria* a constancy in its type which is at variance with those laws which govern epidemics generally. This class of diseases are limited to no climate, and the phenomena they present may vary with the localities in which they appear; consequently no observer, however attentive he may be, can acquire a full and accurate knowledge of them from personal observation alone. The disease as Bretonneau observed it, was no doubt generally of a severe type, as in the whole of them who were examined, post-mortem, the false membrane which constitutes croup was found; from this, and from the fact that he considers this mild form a spurious affection we can justly draw the inference that he considered croup as almost an essential symptom, whereas it is but the most constant fatal termination. We are slow to suspect the accuracy of so distinguished an observer, but our motive is honest when we say, that from the constancy in which we meet with croupal symptoms in his reported cases, he may have overlooked that which would militate against his theory of the identity of croup and diphtheria. From this error arises the common belief that diphtheria is in the majority of cases almost necessarily a fatal disease; those cases mild in form, free from complications, and of favorable termination being overlooked, or regarded as some other form of angina. It is then, from accounts of several cases, and reports of epidemics of virulent fatality, that diphtheria has received the name of a terrible and formidable disease, and so universal is this opinion that reports of mild epidemics are received with suspicion as regards their honesty and accuracy.

There is another class of observers, who having never witnessed the severer forms, adopt an opposite extreme, and look upon diphtheria as only a variety of ordinary sore throat, deriving its fatality from such local circumstances as would intensify any prevailing disease. It has been also called a *malignant* disease, but except where it occurs as an *intercurrent*, or when it terminates in gangrene, we cannot see the justness of this appellation; in the former its malignancy has some connection with the reigning epidemic, in the latter it depends upon the individual constitution or the intensity of the local affection.

*The importance of the false membrane as a symptom.*—Whatever may be the diversity of opinion as regards the nature of diphtheria, by far the greater majority of writers agree that the membraniform exudation is an essential constituent of the disease. Bretonneau remarks that "this redness of the mucous membrane, without thickening of its tissue, so superficial, and yet accompanied by a concrete exudation so abundant, appears to him so remarkable as to deserve the name and character of a specific inflammation, *sui generis*." He therefore, designates this phlegmasia by the term *diphtherite*, from the Greek, *pellis*, exuvium vestis coicea. Whatever other appellations it may have subsequently received, they all refer to the throat symptoms, the presence of which marking the active stage of the disease, and their disappearance on approaching convalescence. But still a greater importance than being a constant symptom is given to the throat affection, "*it constitutes the principal malady*, and the gravity of the affection depends but upon the extension of the false membrane into the air passages." (*Guersant Dict. de Medicine*.) Trousseau, Barthez, Rillet and Valleix, have expressed the same idea in almost the same language. These authors have cited cases where death has taken place without croupal symptoms, but in these "there existed a cutaneous diphtheritis more or less extended, which seemed to announce a general infection sufficient to explain the gravity of the affection."—(*Valleix*.) The fact that diphtheritic inflammation of the skin can exist alone, has led some authors to make this a distinct variety, and when it co-exists with the throat affection, it constitutes a serious complication. The severity of the disease has been determined by the extent of the false membrane, and the rapidity of its reproduction.

Not only has the false membrane received this exalted importance in diagnosis and prognosis, but it is the principal, and with some the only symptom necessary to combat. Thus being more apparent and more constant than other symptoms not less important, it has received a more prominent place in descriptions.

*Does the appearance of false membrane determine the duration of the prodromic stage, or is it at all essential to the full activity of the disease?*—If any morbid condition, prior to the production of the false membrane is to be considered simply as precursory evidences, we, perhaps, in describing the present epidemic, should have mentioned under the head of prodromata, a prostration of the vital powers, a more or less intense anæmia. When these did precede the exudation, the cases were of a severe form, and according to other observers, they are in themselves sufficient to hasten a fatal termination.



The symptoms that we have given as prodromata, would more properly constitute the first stage of the developed disease. The system is already under the active influence of the diphtheritic poison, and they do not necessarily indicate that a false membranous exudation is to follow. It is erroneous to consider the exudation always an essential element, marking the different stages of the disease; it is but an epiphenomenon, a local manifestation of a local poison affecting the whole system—irregular in its appearance as to the stage of the disease, it may be the first evidence, *or it may not exist at all*. The first stage may be of such severity as to confine the patient to bed, and demand active interference on the part of the practitioner, and yet recovery may take place without the appearance of the exudation. We need go no farther than our own observation to prove this.

*Case.*—A stout healthy boy, 14 years of age, was, at the time when three in the same house were suffering from well-marked diphtheria, seized with the usual premonitory symptoms—chill head-ache, vomiting, coated tongue, redness of the fauces—which were soon followed by a general feebleness, pale countenance, weak, though not rapid pulse, and a feeling of malaise to such a degree that he sought his bed or lounge for comfort. This state continued for about a week, when he gradually returned to his former health. Careful and repeated examinations of throat and skin revealed no false membrane. We could give several similar instances, and the phenomena being identical with those present in cases where the false membrane existed, we were compelled to ascribe them to the same cause, the diphtheritic poison. (These cases were *not* included in the 133 reported.) In these cases general and local treatment was adopted; this may have had much to do in preventing the formation of the false membrane, if so, it shows the necessity of giving full importance to the first manifestations of the disease. In sporadic cases the presence of the membrane is necessary to a positive diagnosis, but during the prevalence of an epidemic, uniformity in the other various phenomena is sufficient to guide the practitioner.

In an excellent and valuable report on diphtheria in the March, April and May numbers of the *London Lancet*, we find that in different epidemics "death occurred in many cases in the first stage through sudden and extreme adynamia, *before the exudation had fully formed*." This is not an unfrequent occurrence in the experience of others, as is seen from reported cases in our journals. This statement would lead the reader to suppose that if death took place so early, there was *not time*

for the exudation to form, but it shows that it played no part in the fatality of the disease.

*The severity of the local phenomena bears no relation to the severity of the general affection, nor to the character of the convalescence.*

There are cases in which the "local manifestation" is from the first overshadowed in importance by the constitutional symptoms, and *vice versa*. This was particularly true in the present epidemic. In some cases where the local manifestation was far from being intense, yielding readily to treatment, the constitutional symptoms were severe, and convalescence long and embarrassing. In two of the fatal cases the local symptom was early and easily checked, and was so mild during its continuance as to give but little annoyance either to patient or physician. These cases proved fatal by a general sinking of the powers of life. In other cases this state of affairs was reversed, severe local symptoms with no corresponding constitutional disturbance, and rapid convalescence.

However mild or severe, then, may be the local affection, "the constitutional symptoms form a very large and important part of the morbid manifestations to combat. Moreover, these constitutional phenomena have this peculiarity, that not only do they manifest their presence at the outset of the disease—often, indeed, with such severity as to destroy life before the local or special epiphenomena have had time to develop themselves—but they also tend to show themselves at a very advanced period when the local disorder has passed away, and when, in many respects the patient might otherwise be considered to have recovered from his malady, and to have reached that period when serious results were no longer to be dreaded."—(*London Lancet*, Sept., 1859 p. 214.)

*Diseases analagous to diphtheria.*—All those diseases which present prominent throat symptoms, with a pseudo-membranous exudation, have not only been considered similar, but identical. But to prove the identity of disease it is necessary there should be more than one mark of resemblance or familiarity, there must be some other analogy in their general appearance and effects. The general name of a disease seldom gives us a true appreciation of its nature. A disease may differ from itself, so to speak, and when it takes its name from a prominent symptom, yet common to other diseases, divisions and distinctions are made which soon leads to a confusion of diseases between which there is not the least analogy. The diseases with which diphtheria is considered by some to be identical, are, croup, pultaceous pharyngitis, and angina gangrenosa; in considering these we will include all we wish to say on the

subject of diagnosis. The ordinary forms of tonsillitis and pharyngitis present local and general symptoms so diverse from the disease under consideration, that they demand no notice from us, and laryngismus stridulus, trachitis, and laryngitis, can only be confounded with croup, which we consider essentially distinct from diphtheria.

*Croup.*—Since Bretonneau's work on diphtherite, the identity of angina membranacea with croup, has been considered a well established pathological fact. Authors have received his conclusions as indisputable, and they, substituting his observations for their own, freely borrow from his pages the details for their descriptions. Croup is rarely described as an isolated affection, it being considered a phase or period of pharyngeal diphtheritis, the single fact of the presence of the false membrane in both, establishing their identity.

"M. Bretonneau has demonstrated that epidemic angina maligna is a true pellicular inflammation like that of croup. He has also proved that these two morbid alterations are identical in their pathological anatomy, differing but in the seat they occupy."—(*Geursent Dict. de Médecine*, t. 9, p. 336.) "Is it necessary to say that the skilful physician of Tours, has proved in the most positive manner the identity of the different pseudo-membranous inflammations of the mucous and cutaneous surfaces, designated by the names of angina gangrenosa, croup, etc."—(Barthez and Rillet.) This very identity, contended for by Bretonneau, was fully and distinctly stated before him by Dr. Bard in 1771, and by Dr. Jas. Johnstone, 1779. The latter says, "There is but one other species of angina from which this disease (ang. maligna) requires any distinction, and that is croup. A small degree of attention to the several divisions of that distemper, which have been made by the best writers, will show that *in respect to many of the cases there can be no distinction, for in reality there is no difference.*"—(Laennec on the chest, p. 126, note by Trans.)

Thus we see that not only French, but American and English authors have endeavored to identify diseases which are opposite; each of these observers, however, arrived at their conclusions from observations made during epidemics of angina maligna.

Bretonneau, whose researches into the phenomena of ang. maligna have been more minute than those of any other pathologist, proves this identity from the result of fifty-four post-mortem examinations. In these he twice found the false membrane confined solely to the air passages, while in all the other instances, the disease invariably commenced in the pharynx, and presented symptoms of ang. gangrenosa. "If we consider,"

says a reviewer, "that in the whole of those who were examined, *post mortem*, the false membrane which constitutes croup was found in the larynx, and if we consider that the same fact under the same forms and attended by the same circumstances, were constantly observed by Dr. Guersant, and also by Dr. Velpeau, we shall be strongly urged to grant that angina maligna and croup, are the same disease affecting different portions of the same mucous membrane." This is only a statement of the invariable presence of a disease, the nature of which is in question, and the conclusion arrived at is only a proof that the croupy affection is the common fatal termination of the anginous affection, and it is from fatal cases alone that Bretonneau endeavors to establish this identity. He rejects this method of reasoning when he wishes to prove the specific character of diphtheria. Thus, when croup complicates a febrile affection, as measles, scarlet fever, etc., it is no longer *croup*, this being an expression of that morbid state to which he has given the name of diphtherite, and having a specific character; whereas secondary pseudo-membranous laryngitis is only specific in so far as it borrows this character from the disease it complicates. From the manner in which he proves the identity of ang. malign. and croup, we cannot see how he can make this distinction, for both present the same resemblances in the nature of the false membranous deposit and in the coincidence of its appearance upon the mucous membrane of the pharynx and larynx. This difficulty, perhaps, presented itself to his mind, when he says, "that the false membrane alone is not sufficient to characterize croup." Had he recognized this fact when endeavoring to prove the identity of diseases so opposite, he would have searched for other analogies than this one gross resemblance. Although he acknowledges the existence of croup commencing in the larynx or trachea, he insinuates that these causes may not be true diphtheritic inflammation. "He asks as if he feared he were pushing his opinion of the identity of these diseases too far, whether it does not happen that concretions other than those of a diphtheritic nature, are not developed in the larynx."—(*Valleix*.)

Other authors, with him, assert that the membranous angina is almost essential to croup, the angina constituting the first period. "If croup, instead of commencing in the pharynx, commences in the larynx, which is rare, or in the trachea, which is still less frequent, the first period of the disease is wanting."—(*Guersant*.) But how explain the fact that epidemics of croup do occur where the presence of the membranous pharyngitis is the exception and not the rule? On the other hand, how explain the fact that epidemics of diphtheria occur

and none of the cases present croupal symptoms? Why is it only in the epidemic form that croup begins with the pharyngeal affection, whilst in sporadic cases it debuts by the larynx? What is there in the diphtheritic poison, that it should change its seat of manifestation in different epidemics? That it should at one time produce an epidemic of the 'first period,' and at another, of the 'second period' of the disease?

There are other more positive differences between these diseases.

*They differ in their nature.*—Croup is an acute inflammation of the larynx or trachea, or both, characterized by an exudation of false membrane. It is *purely* an inflammatory disease of a highly acute character—the symptomatic fever severe, pulse accelerated, skin hot, etc.—and as such it is described by those who do not deny its identity with ang. malig.

Angina maligna is essentially an asthenic disease, the fever of a typhoid character. "It is accompanied from the first by a depression which seems to be in many respects peculiar, and to approach nearer to the pure asthenia than anything witnessed in other cases of acute disease. "The constitutional symptoms present nothing in common with those of croup. This fact did not escape the notice of those who contend for the identity of these diseases, and the summary and easy manner in which they explain away this *capital* difference between them is anything but satisfactory." Croup, *even when most partial*, is almost always accompanied by great constitutional disturbance, symptomatic fever acute and very severe, etc. In some cases, particularly such as occur in hospital, the state of the system is very different, there being evident marks of a septic change in the fluids of the body; the pulse is but little accelerated, the skin harsh and dry, the debility extreme, and the breath fetid even where no gangrenous specks exist." This variety is denominated *asthenic* by Guersent and Bretonneau.—(Laennec, disease of the chest, p. 128.) There can be no doubt that ang. malig. is referred to in the above, as he, in the following sentence, speaks of the character of the false membrane, "especially that lining the throat." "When croup is connected with inflammation of the tonsils, soft palate and fauces, and the deposit of false membrane upon them, the disease is of an *asthenic* character."—(West, dis. of children, p. 224.)

If there is no essential difference between these diseases, if they are of the same nature, and depend upon the same cause, we cannot comprehend why croup should be *sthenic*, when the false membrane begins in, or is confined to the larynx and trachea, and *asthenic* when it is first formed in the pharynx. It seems absurd to attribute to this slight variation of one to

two inches in the seat of the local manifestation, and this upon the same continuous membrane, a power of producing opposite conditions of the system.

Again, it is said by Bretonneau, Guersent and others, that *asthenic* croup is contagious, but that this is true in regard to croup in general, is a question still undetermined. This admission is unfortunate to their theory of the identity of the two diseases. We could have produced instances, when giving the history of the present epidemic, proving that diphtheritic pharyngitis is contagious, but we did not think our evidence could strengthen a fact already well established. We cannot but exclaim with Dr. Cheyne, "*Asthenic Croup.*" Croup with an unaccelerated pulse, fetid breath, and propagated by contagion!

*The difference in their symptoms.* Besides the difference in constitutional symptoms already spoken off, there are differences in one or two local symptoms, which we will but briefly hint at.

*Swelling of the Lymphatic Glands of the Neck.*—Bretonneau makes the absence of this symptom a distinguishing characteristic between *genuine* croup and laryngismus stridulus. It is indeed a constant attendant upon ang. malig., but that it is absent in tracheal croup, we need but give the following quotation. "The swelling of the cervical lymphatic glands, so common in diphtheritic pharyngitis, is wanting when croup commences in the larynx. In the epidemic observed by Vauthier, it was noticed but once in 37 cases. At Geneva it is rarely ever observed, and this has been the experience of one of us in the sporadic cases seen in Paris."—*Barthez and Rillet.*

*The circumstances attending the development of cutaneous diphtheritis are in themselves sufficient to differentiate diphtheria from all other disease.*—It is in those cases where the pharyngitis exists with all its diphtheritic characters that the exudation is most liable to appear on the skin. Any cause that deprives this surface of its epidermis becomes the occasion of the development of the false membrane. In genuine croup this is never observed. Do blistered surfaces and leech bites, in cases of croup, put on this morbid action? Experience in these remedies answers this question in the negative. These remedial measures are recommended in croup by those who claim the identity of these diseases, but they are strongly denounced by the same authors in diphtheritic pharyngitis, as they produce a "dangerous complication"—a cutaneous diphtheritis.

*They differ in their treatment.*—The treatment in the one is decidedly antiphlogistic, in the other it is essentially tonic and stimulant.



"I have never met with an exception to the rule which prescribes the free abstraction of blood in every case of severe idiopathic croup, and you must bleed largely and give tartar emetic freely, for these are the two measures on which your main reliance must be placed. Much good can be done by blisters, &c."—*West, page 224.* Yet this author cannot see that there is any ground for supposing there to be an essential difference between croup and the affection described under the name of diphtheritis by Bretonneau. He adds, when croup begins with a false membranous deposit in the fauces, the disease is of an asthenic character, *and a corresponding modification must be made in the treatment.*" What these modifications are we need not repeat here, suffice it to say that this very 'modification' proves the diseases different in their natures.

*The difference in the results of the operation of tracheotomy* in these diseases is another distinguishing mark. We copy the following from notes taken by ourselves, a few years ago, in the wards of the "Hospital des Enfants Malads," Paris; "The presence of false membrane in the throat, nares, or on the skin, strongly counter-indicates the operation of tracheotomy." If the false membrane in the trachea is the only cause of death, why would not its extraction be followed by the same result in either case? We believe, without having any positive proof for the assertion, that in croup there is not that tendency to rapid reproduction of the false membrane as is seen in diphtheritic pharyngitis. We know that if the false membrane of croup is thrown off, the tendency is to recovery; but in the pharyngitis, notwithstanding frequent caustic applications, the membrane rapidly re-forms, and this continuing in cases for many successive days.

*They differ in their convalescence.* In croup, when the mechanical obstruction is removed, and the case terminates favorably, the return to health is rapid; while the convalescence of the other disease is slow and uncertain. Long after the disappearance of the false membrane there may be developed morbid manifestations, in themselves sufficient to cause death.

*Scarlatina.*—The confusion between diphtheria and scarlatina is still so common, that we consider it worthy a moment's consideration. From a rude resemblance in the throat symptoms, from the not unfrequent coincidence of scarlatina with diphtheria, and from the fact that it is occasionally complicated with a pseudo membranous laryngitis, arises the error that they are closely allied. However, there are some cases of scarlatinal angina which so closely put on the aspect of diphtheria, that it is impossible to distinguish them. Guersent and others have met with such exceptional cases.

Pultaceous pharyngitis, like croup in diphtheria is a secondary affection, the characteristics of the principal disease distinguishing the local affection. The violent general symptoms, the eruption, heat of the skin, a remarkable acceleration of the pulse and the desquamation will guide the practitioner. But the differences in the local phenomena are very decided. According to Bretonneau "*scarlatina anginosa* is as different from diphtheria as *scarlatina* itself is from small pox. In the pharyngitis of *scarlatina* the tonsils are rather coated (*enduites*) by the exudation than covered (*recouvertes*) by membraniform filaments. The exudation in the pharyngitis of *scarlatina* is preceded by a *deep red color* of the whole of the pharyngeal mucous membrane; in diphtheria the color of this membrane is simply inflammatory. The exudation in the former is white, opaque, and caseous, and is easily indented. The diphtheritic false membrane is grayish and so tenaceous, that it will not easily receive the impression from a hard body. Instead of commencing upon the tonsils and spreading from these to other parts, as in diphtheritic pharyngitis, the pharyngitis of *scarlatina* invades simultaneously the whole cavity of the fauces and nares. Lastly, the most important fact is, that pultaceous pharyngitis has not like true diphtheritic, a tendency to invade the respiratory passages, but on the contrary its extension is towards the *asophagus*."

The development of the false membrane upon the skin distinguishes the diphtheritic from scarlatinal pharyngitis. "Huxham and Fothergill have not spoken on this symptom, although they have described *scarlatina anginosa* with great care. M. Trousseau himself, does not mention it in his description of the latter disease, yet he has cited a great number of cases observed in epidemics of diphtheria."—(Valleix.)

The present epidemic furnishes two facts worthy of notice: First, in none of the 133 cases was the scarlatinal eruption observed, although searched for; Second, 34 of these cases had had scarlet fever.

*Gangrene*.—"In comparing" says M. Bretonneau, "the morbid appearances found on dissection in fifty-five subjects of all ages, who in the course of two years fell victims to the epidemic angina, in no case, even of the most malignant nature, was there anything like gangrene of the parts. Ecchymoses of small extent, and an occasional slight erosion of those surfaces where the disease had longest continued, were the gravest alterations of structure which were seen."

Although the fact that the mucous surface sub-jacent to the false membrane, preserving its integrity, is a very strong and important distinguishing characteristic of diphtheritis, yet there

are exceptional cases where the diphtheritic inflammation terminates in ulceration and gangrene, the latter condition extremely rare. We have given instances of both of these terminations. We know that the color of the false membrane and its odor in some cases of diphtheritis, with a tumefaction of the surrounding mucous membrane, may so closely resemble a circumscribed gangrene that no less an acute observer than M. Bretonneau was deceived in one or two cases, but in the instance we have given there was no possibility of error, as will be seen by referring to the case.

Of the existence of gangrene of the pharynx as a primitive affection, there is no dispute, but that it ever appears in an epidemic form there is much doubt. It almost always occurs during the course of some other disease, as measles, scarlet fever, small pox, &c.

In those cases of diphtheria which *simulate* gangrene, the manner of invasion, and the march of the disease, and on removal of the false membrane, the condition of the subjacent mucous surface, will clear the diagnosis.

We had intended to examine the different theories as to the origin of diphtheria, and to give a history of the disease as it has appeared in the states, as far as we were able, but we must defer these for a future occasion. We will conclude with the following quotation, as we could not express our conclusions in clearer language.

"I. Diphtheria is a *specific* disease. This is seen in its origin, march, and mode of extension; in the character of its exudation, in its local manifestation; in its seat of predilection; in its *toxic* influence; in its prodromata; its manner of termination and its sequences.

II. It is often confounded with scarlatinal angina, and with gangrenous cynanche," and with croup, we have endeavored to indicate the diagnosis.

"III. It is propagated by infection and by contagion.

IV. The treatment should include the local application of a solution of nitrate of silver, hydrochloric acid, or the tincture of sesquichloride of iron. The internal remedies most useful are, the tincture sesquichloride of iron, hydrochloric acid, and chlorate of potash.

Nourishing diet and stimulants.

V. The means of prevention, besides careful hygienic measures—as ventilation, etc.—must also include the daily examination of the throat where the epidemic type presides, a matter of the greatest importance, as experience has fully shown, and the early isolation of the patient as soon as attacked—a precaution hardly less necessary."—*London Lancet*, May, 1859.

## SURGICAL NOTES.

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*Fracture of the Patella.*—Mr. —, aged 23 years, fell and struck his knee upon a stone, fracturing the right patella transversely, and of course losing instantly the power of extending the leg. On examination I found the two fragments widely separated, but the patient was absolutely free from all pain and tenderness in the injured part. I drew the fragment together with a figure of eight bandage, and subsequently devised a pair of concave yokes for retaining fractured surfaces in contact. No inflammation whatever followed, and reparative action was very slow. After many weeks there was a feeble ligamentous union, and the patient began to walk about.

One day in making a little stronger muscular effort than usual, he ruptured the ligament, and was immediately reduced again to his former condition. This time I found him suffering considerable pain. On examining the patella I found that there was a marked thickening of the areolar tissue about it, through which hypertrophied tissues the fragments seemed to get more abundant supplies of blood and nervous influence than in the natural state. A considerable inflammation followed, and in a much shorter period than before there was a firm ligamentous union. The treatment was the starch bandage, which served its purpose admirably, and at the same time allowed the patient to get about and do some business.

The study of this case suggests some thoughts respecting the causes which prevent union so universally in transverse fractures of the patella. It is believed by many that these causes are, first, the presence of synovia between the fractured surfaces, and secondly, the separation of the fragments.

Now the synovial fluid does not prevent the union of oblique fractures of long bones when they open into joints, though it is abundantly present; nor is there any difficulty, usually, in keeping the fragments of a patella in contact, if the leg is kept extended. Some other reason, therefore, exists for the want of reparative power. If we examine the anatomical relations

of the patella, we shall perceive what this reason is. The deep surface of the bone is entirely occupied by a synovial lining, and therefore receives no blood vessels except such as creep under the membrane at the edges. The external surface is in like manner covered by the great bursa, which equally separates it on that side from direct vascular supplies. The two lateral borders are connected with the capsular ligament of the knee-joint, which is fully furnished with vessels. The lower border gives origin to the dense *ligamentum patellæ*, a tendinous structure very poor in vascular supplies. The upper border alone receives a full amount of nutrition, in consequence of its attachment to the *quadriceps femoris* muscle. From this attachment, especially where the two *vasti* muscles are inserted, the patella obtains nearly the whole of its nutrition. It follows, therefore, that in a transverse fracture, the lower fragment will be almost cut off from its nutrient vessels, and is in fact very much in the same condition as the head of the femur in the intracapsular fracture of the neck of that bone. It has therefore no power to throw out plastic material, and fails to effect a bony union, however faithful may be the surgeon.

This view suggests almost irresistably the propriety of resorting to some operative procedure in these cases, by which a temporary inflammation and vascularity may be induced in the tissues around the lower fragment, which will supply it with blood during the time of treatment. I think that in this way many fractured patellas might be brought to form a bony union which now fail of it. The irritation might be produced sub-cutaneously by the careful introduction of a small stilet, or other instrument.

The obvious danger of exciting an inflammation in the knee joint is the great obstacle to such an operation, and I know of no experiments as yet which would show how this danger may be avoided, but as the joint itself need not be penetrated, perhaps this operation will ultimately be found feasible.

## CASES AND REFLECTIONS ON THE USE OF THE GUM ELASTIC AIR BAG.

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By W. H. BYFORD, A. M., M. D.,Professor of Obstetrics, etc., in the Medical Department of Lind University.

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I was called to see a patient in consultation with Dr. P., who was suffering with symptoms of impacted pelvis; caused by retroversion of the uterus, viz: retention of urine and fœces, tenesmus of very distressing character, vomiting, irritative fever, great restlessness, etc. Her symptoms had been gradually increasing for three weeks, until they had become intolerable to her, and alarming to her friends and medical attendant. Two unsuccessful attempts had been made to replace the uterus. I found the pelvis literally crammed with that organ, pregnant nearly four months. There was hardly room to pass the finger up behind the symphysis pubis, and a little to one side. She complained of excruciating pain upon every touch, and declared she could not bear any manipulation for the rectification of the displaced organ.

We could not induce her to take a favorable position on the bed, and I operated while she was sitting on the lap of a female friend. I insinuated my fingers along the perineum, coccyx and hollow of the sacrum; gently, but firmly pushing the tumid uterus upwards and backward along the curve of the sacrum far as I could reach. Holding it in this position, I introduced my colpeuryuter, empty, as far up along the sacrum as I could make it go, and held it there until Dr. P. inflated it. Air was driven into it until it was the size of a large hen egg. I then pressed it thus inflated up high as I could reach, and again had more air thrown into it, until it had increased to nearly double the size after first inflation. Pressing it still upward and backward firmly against the upper part of the sacrum, the fundus suddenly slipped above the promontory, and placed itself into the natural position. I could then pass my fingers freely across the pelvis in any direction, and feel the os uteri occupying its centre.

The whole operation did not last longer than ten minutes, apparently was not attended by any increase of suffering, and



was not succeeded by any bad symptoms. The patient expressed the relief she felt in the strongest terms immediately after the operation, and passed a large quantity of urine. She carried her child to full term, and did very well in every respect.

I prefer the elastic bag, as an extension to my fingers, to any solid instrument, because its soft airy elasticity defends the uterus from contusion, and in this case it proved very effective. I think this manner of using it very much better than passing it into the rectum—as recommended by some authors—and then inflating it. The painful distension of the rectum by the expansion of the instrument, I should think would be horrible, if carried to such an extent as to lift the uterus above the pelvic brim, and I think the bag would operate to less advantage than if properly managed in the vagina. In using the elastic bag, it should be moved high as possible along the hollow of the sacrum, with the fingers first, and then the bag, *empty*, placed well against the sacrum and up against the fundus uteri, and carried up, pushing the uterus before it while it is being inflated. It should not be inflated larger than merely to afford an extension for the fingers, and not so as to anywhere nearly fill the pelvis. We should then move it upward and backward, inflating and raising at the same time, until the fundus uteri rises above the promontory of the sacrum. The air should then be allowed to escape, and our instrument withdrawn. Too great an inflation will fill up the pelvis too much, and the impinging points of this medium of power will be too numerous and diffuse to be efficient, as our force should be as near the anterior surface of the sacrum as possible. When not bound down by adhesions, or it has not already acquired too great a size to raise through the superior straight, this mode of operating need not fail to replace a retroverted uterus.

A good and sufficient substitute when the elastic bag could not be procured, is a strong beef's or hog's bladder. By tying a small reed, a foot or eighteen inches long, into the urethral canal we could inflate this natural bag sufficiently for use while in the vagina.

The gum elastic bag is being used for many purposes about the pelvis. It makes the best tampon for hemorrhage in cases of abortions in early pregnancy, and placenta previa in the later stages of this condition. While checking the hemorrhage in these cases it excites the uterus to contraction. In consequence of this last effect it is better not to use it where there is any hope of saving the fœtus from expulsion. It acts admirably as a pessary in prolapsus uteri, where this affection is so bad as to be unmanageable by any other sort of mechanical contrivance. An instance of this kind occurred not long since in the practice of a friend of mine—a man of forty years experience in the profession—in which the uterus, as I witnessed myself, was expelled beyond the vulva, making a tumor four inches long, the os being the most dependent part.

Every kind of pessary and other device which could be thought of by any friend and others with whom he consulted, failed to retain the organ in the pelvis more than a few moments at a time, soon as she raised herself up and walked about, the instrument and uterus came tumbling out together. After returning the uterus, the colpeuryuter was introduced high up, and inflated till it produced slight uneasiness from distension. This retained the uterus in place for several hours, but so lax were the external soft parts that it also escaped. She now wears it with great comfort to herself by using a T bandage over the vulva. This bandage could not be made to retain any other kind of pessary in place, which plainly showed the advantage of this.

I see since the above was written some interesting observations in the last number of Braithewaite's retrospect, in respect to the use of the air-bag. From it, and observations of others, we are justified in using the bag as a plug in hemorrhage from the nose, anus, etc.

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#### MUTILATION OF A CHILD BY A HOMŒOPATHIC PHYSICIAN

BY HIRAM NANCE, M. D., Lafayette, Ills.

Observing an article in the "Chicago Medical Journal," for January, bearing the above caption, inserting midwife in-

stead of homœopathic physician, has led me to report the following case which came to my knowledge in the year 1855.

On the night of the 5th of May, being at Church, I was called out by an intelligent gentleman, a near neighbor of the patient, and requested to hurry on as fast as possible, with a positive injunction not to forget my obstetrical instruments, as he had been informed by the father of the patient that their use would be necessary. I inquired why such orders should be sent by a man making no pretensions to medical knowledge, and the messenger replied that they already had a physician, (a homœopath) but wanted me to hasten on and assist him out of a difficulty, from which he found it impossible to extricate himself, or save the life of patient or child.

Accordingly, with my instruments, I started for the house of the patient, telling the messenger at the same time that consultations and professional etiquette with homœopathic physicians were not tolerated in our school, but in a moderate degree; and not at all by myself individually. Telling him in plain and unequivocal terms, that when I arrived, should difficulties and perplexities present themselves in the case, that either I would take the case entirely into my own hands, or leave the house and let the Homœopath fight the affair out as best he could. When I arrived at the gate, a lady of my acquaintance met me, and said, "hurry, Doctor, I believe Mrs. D. will die!" I replied, Mrs. R., hav'nt you a physician? She said "yes, but he is good for nothing."

I went in, found Mrs. D. sitting up in bed, seemed awfully alarmed, face red, and turgid with blood. Rejoiced to see me, said "Oh! Doctor do help me, do! do!" I said Mrs. D., you have a physician, can't he give you the necessary assistance? She said, "No, I want you Dr. Nance."

This was the lady's first confinement, and her father had brought her home under the parental roof to remain until due time after her parturition. As the case had become alarming, her father, an old man of 65, had been admitted into the lying-in chamber to see his daughter, to sympathize, and if necessary, render any assistance manually to promote labor. I say the the old man sat by; and over in a corner, on a small couch,

lay our *Homœopath*. I asked Mrs. D. and her husband if they desired me to take charge of the case; they replied in the affirmative; but the old man said he wanted "both Doctors, as the case required instrumental aid." I told him that I was not of the same school as Dr. L., and positively refused association in the practice of medicine in any of its branches with irregular bred physicians. The old man spoke up again, and said instruments must be used. I made no reply, but Mrs. D. and wife said, "We want you." This was enough. I immediately made an examination, found the head presenting in its first presentation, os uteri fully two-thirds dilated, and the head about engaging in the inferior straight; parts rigid, pains frequent, hard, but ineffectual. Observed some peculiarity about the scalp of the child which I could not account for. Inquired of the *Homœopath* (as he still reposed upon his couch in a *wakeful sleep* watching me) what could be the difficulty with the scalp; but he would make no reply. I told the ladies present, husband, and patient, that instruments were not required, but that in a short time by prudent management, I hoped she would be safely delivered; but I supposed the child from examination, to be dead.

I ordered a bandage, as the lady was quite plethoric, pulse full and heavy; opened a vein and bled nearly to syncope; this relaxed the system. I then gave a strong decoction of *Secale Cornutum pro re nata*, and in an hour's time my patient was safely delivered. Child breathed feebly for fifteen minutes, but never cried. On examination, found its scalp lacerated to an awful extent; it was torn into fragments, and a strong attempt had been made to break down the cranium and extract the child in fragments, but their obstetrical instruments were not manufactured sufficiently well to perform so grave an operation.

No one present had told me that any instrument had been used in the case; but now the matter was plain before me. I made inquiry what instrument had been used, and was told that the *Homœopath* and the old man had procured a large *strong awl*, such as is used in sewing leather, had bent it and then would hook it into the scalp, and both "*pull*" until the

hold would give way ; then try to break down the skull, but finally gave up in despair. *The child undoubtedly was killed by their manipulations.*

And now the matter was plain to my mind why I was urged to use instruments. Had I done so, those bruises and lacerations on the child's head would have been laid to me. As I did not I came out unscathed, and our "little pill" man was found consulting some of the first legal men in the State, fearing a suit for mal-practice would be commenced against him; or our Grand Jury would learn the facts in the case.

Suffice it to say, the patient got well, and the Homœopath made for parts westward.

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#### CLINICAL REPORTS.

Male Ward, No. 1. Service of Prof. N. S. DAVIS. Dec., 1859.

Having frequently received letters inquiring for the results of my experience in the use of Hypophosphites and various other remedies in the treatment of Pulmonary Tuberculosis, I have thought it best to give the following brief report of a clinique on several cases of phthisis, which have been repeatedly brought to the notice of the clinical class during the past winter.

*Case 1.* Mr. B., a German, aged about 25 years, was admitted into the Hospital ten days since. At the time of his admission he had a slight fever, accompanied by soreness in his chest behind the sternum, and a pretty severe cough. He took three or four alterative doses of Hydrarg. Chlorid. Mit. with Pulv. Doveri, followed by a laxative; which lessened the heat and dryness of the skin, and somewhat relieved the soreness in the chest. But the cough and quickness of the pulse continuing, I prescribed the following mixture, to be taken in doses of a teaspoonful every four hours, viz:

℞	Comp. Honey of Squills, Senega. &c.,	3j.	
	Tinct. Bloodroot,	3ss.	
	Camph. Tinct. Opium,	3jss.	
	Tinct. Verat. Viride,	3j.	Mix.

Under the influence of this, his cough has abated but not ceased; the soreness behind the sternum has disappeared; and

he has no longer any manifest febrile symptoms, except an accelerated pulse. But as you stand by his bed-side, gentlemen, you observe that his respiration is shorter and more frequent than natural; his pulse about 90 per minute and quick; his face and limbs show a moderate degree of emaciation; and he has a frequent, short cough, more severe in the morning, and accompanied with a moderate expectoration of whiteish mucus.

At the time this patient was admitted, he was undoubtedly affected with a sub-acute bronchitis. But the symptoms peculiar to that disease having subsided, while there still remains a short cough, quick sharp pulse, with moderate emaciation; the question is at once suggested whether the patient is not affected with incipient tuberculosis. The probability of this is increased by the fact that he has had more or less cough with some shortness of breath on taking muscular exercise, for three months past. But there are no symptoms on which we can rely as certainly diagnostic of tubercular disease in its early stage, except those derived from a physical examination of the chest. And even these are not among those most easy of recognition by the inexperienced. Making the chest bare, and taking one of Comman's stethoscopes, we will carefully auscultate the respiration and the voice. In the infra-clavicular region of the right side we find the inspiratory murmur enfeebled and irregular in its development, while in expiration the murmur is renewed and prolonged. There is also in the same region moderate broncophony or increased vibration of voice. Over the corresponding region of the left side, the respiratory murmur is exaggerated or puerile, but neither irregular nor prolonged. After each of you have taken the stethoscope and examined for yourselves, we will ascertain the result of percussion. If the room is kept perfectly still, while we percuss over corresponding parts of the two sides of the chest, you do not readily detect any alteration from the natural resonance until we reach the infra-clavicular region of the right side, where you readily recognize a moderate diminution of the resonance. Hence, we may sum up the results of the examination as follows: an enfeebled, irregular and prolonged respiratory



murmur, with increased vibration of voice, and increased dullness on percussion over the infra-clavicular region of the right side; and simply an exaggeration of the respiratory murmur over the upper part of the left side. Here, you perceive, are no rhonci, or new sounds, but simple alterations of the natural ones; requiring much care to appreciate them; and yet they are of the most serious import, as has been already explained to you in the lecture room. The irregular and prolonged murmur, the moderate broncophony, and the diminished resonance, clearly demonstrate the existence of greater density than natural in the upper lobe of the right lung; while the simple exaggerated murmur of the left side is undoubtedly produced by the more forcible distension occasioned by diminished capacity of the right lung for air. But what causes the greater density of the upper lobe of the right lung? On the proper solution of this question depends the correctness of our diagnosis. We may have increased density of the lung from several different pathological conditions; from pneumonia and its consequences; from pleuritic effusions; and from tubercular deposits. The first would be preceded and accompanied by the well known phenomena of pneumonic inflammation; which have not been present during any part of the progress of the case before us. The second is always accompanied by increased *fulness* of the side affected, while the dullness is greatest in the most dependent part of the chest, instead of the upper and anterior part, as in this case. It is well-known, however, that the deposit of tubercular matter almost always commences in the upper lobe of the lung, and is accompanied by atrophy of the pulmonary tissue, instead of increased fulness. From these and many other considerations mentioned, but which would occupy too much space in this report, it is very evident that the patient before us has incipient or primary tubercular deposits in the upper lobe of the right lung. The special pathology of tubercle, and the successive changes which it undergoes, have been so fully explained to you, that we will make no comments on that subject this morning. The rational symptoms and physical signs accompanying these changes, are strikingly exhibited in two other patients in this ward.

*Case 2.* Mr. C., aged 26 years, native of Ireland, was admitted to the Hospital three days since. He has had some cough, with increasing emaciation, for the last eighteen months. You see by the vessel here that his expectoration is considerable, consisting of mucus, with circumscribed masses of distinctly purulent matter. His pulse is 100 per minute and soft; lips pale, cheeks sunken, and whole body considerably emaciated; the pulse is more frequent in the evening, with some heat of skin, and some sweating towards morning. By uncovering the chest you see the infra-clavicular space of the left side decidedly depressed, and the intercostal spaces more or less sunken on both sides. On applying the stethoscope to the left infra-clavicular region, you have no respiratory murmur proper, but a loud, sharp, sub-mucous and crackling rhoncus. The broncophony is strongly marked, and so is the dulness on percussion. Here, you have all the phenomena of tuberculosis in the second or active stage of its advancement, when the tubercular masses are softening, and a slow ulcerative process is being established in the tissue surrounding them; inducing more rapid emaciation, and the slighter grade of hectic fever. To complete the examination of physical signs belonging to phthisis in the different stages of its progress, you may turn to the next bed.

*Case 3.* Mr. D., a native of Ireland, aged 30 years, has had tubercular disease for the last 3 years. You see him extremely emaciated; his pulse 110 per minute and small; respiration very short; coarse rattling of mucus in the trachea and larger bronchial tubes; voice hollow and husky; with copious purulent expectoration and night sweats. Uncovering the chest, we find the infra-clavicular region on both sides much depressed, and all the intercostal spaces sunken. On applying the stethoscope to the upper lobe of the left lung, you hear a very plain cavernous sound with each respiratory act, close under the end of the stethoscope, and on causing the patient to articulate sounds, he seems to speak almost directly into the end of the instrument, producing what is called pectoriloquy. Thus, gentlemen, you have in the first case examined this morning those simple alterations in the natural sounds produced by res-

piration, voice, and percussion, which indicate tubercular disease in its first and comparatively dormant stage.

In the second case you have all the phenomena of the second stage, or that of active softening of the tubercular masses.

While in the third case, you have the cavernous respiration and pectoriloquy indicating the third stage, in which the softening has been completed, the matter discharged by expectoration, and cavities more or less numerous formed in the structure of the lung. It is not often that you can have presented to you so complete a review of the different stages of pulmonary tuberculosis in a single clinique. As the present clinique hour is exhausted, we will reserve our comments on the treatment proper for these cases until we meet in the ward to-morrow morning.

The next morning the comments on these cases were resumed in substance as follows.

Gentlemen, as we promised yesterday, your attention will be directed during the present hour to the treatment of phthisis, as suggested by the cases at present in the ward. There are but few diseases that have been subjected to a greater variety of treatment, or concerning which the professional mind has diverged into greater or more opposite extremes. It is but a few years since pulmonary phthisis was regarded as originating from inflammation, and it was deemed of the highest importance to keep each patient closely confined in a uniformly warm atmosphere; to avoid all stimulants; to restrict the diet; and to directly combat the disease by local bleeding, counter-irritation, with internal sedatives and anodynes. Subsequent investigations having developed a more correct knowledge of the pathology of tuberculosis, and clinical observations clearly proved the inappropriateness of the former treatment, at least in a large proportion of cases; the practice of the profession took so rapid a turn in the opposite direction, that the treatment advised by many at the present day might be summed up as consisting in free exercise in the open air, free use of alcoholic drinks, (especially bourbon whiskey,) cod liver oil, and the most nutritious diet. Abundant observation has satisfied me, however, that cases of tuberculosis differ much from each other in

their causation or mode of development, their progress, and the co-existing condition of other important organs; and consequently that no special routine of treatment can be marked out as applicable to all cases. In many cases the development and progress of the disease is extremely slow, almost entirely exempt from inflammatory or febrile symptoms, and equally exempt from any derangements of digestion. Such cases will generally bear rich food, stimulating drinks, and abundant exercise in the open air at all seasons of the year. In another class of cases there is a low grade of tubercular inflammation in the mucous membrane of the pharynx, larynx, and bronchia, which not only greatly increases the severity of the cough, but renders the patient so sensitive to atmospheric changes that out of door exercise can be taken only to a very limited degree and with extreme caution. Still another class by no means small, presents a similar inflammatory condition of the mucous membrane of the stomach and intestines, rendering it very difficult for the patients to retain or digest anything but the most bland and unstimulating articles of diet or drink.

A well marked case of this kind now occupies a bed in the ward for females below. It is very obvious, therefore, that we cannot prescribe a fixed routine of treatment for phthisis without doing as much harm to some patients as we do good to others.

The general rules by which I am governed in the treatment of pulmonary tuberculosis, are: 1st—To give the patient as nutritious a diet as the condition of the digestive organs will bear without inconvenience. 2d—As much exercise in the open air as the strength of the patient will permit without injurious fatigue. 3d—To give such medicine as will allay the morbid sensitiveness or excitability of the respiratory organs, and improve the functions of assimilation and nutrition. 4th—To remove with the least possible waste of strength and vital power such local developments of inflammation as frequently supervene during the progress of tuberculosis.

In carrying out the first rule, many attempt to prescribe a certain amount of nutritious food, and then stimulate the digestive organs up to the point necessary for digesting it. From such a course I have never known good results.

On the contrary, I fully agree with Dr. Thomas Watson, that it is much better to adjust the quantity and quality of food to the existing condition of the stomach, than to undertake the very difficult task of adjusting the stomach to a given quantity of food. One ounce of nutritious matter *perfectly* digested and assimilated, is better for any patient than four ounces *imperfectly* prepared to nourish the textures of the body. A large proportion of phthisical patients have no difficulty in taking a sufficient quantity of any of the ordinary articles of diet, such as bread, meat, and vegetables; but for the class of patients to which I just alluded as possessing a highly irritable condition of the stomach, or what some of the older writers called "dyspeptic phthisis," the selection of diet is of paramount importance. In the great majority of such patients I have succeeded better with milk than any other article.

By adding lime-water in the proportion of one ounce to four ounces of milk, patients will generally bear from one gill to one pint at a time without inconvenience; and it contains all the elements necessary for nourishing the body more perfectly than any other one article of diet with which we are acquainted.

For drink, I induce tuberculous patients generally to use what is called "Algæ Chocolate," as a substitute for both tea and coffee. Besides being more nutritious, it contains a small proportion of iodine from the sea-weed which is mixed with the chocolate, and is therefore more or less valuable as a medicine. In regard to the patients here in the ward, the first and second cases to which I have called your attention, are able to take a reasonable quantity of all the more nutritious articles of diet. But the third case has become so much exhausted that the functions of the alimentary canal are much impaired, and he has become subject to short attacks of diarrhœa.

This patient has been obliged to rely principally on milk porridge, that is, sweet milk boiled and moderately thickened with wheat flour.

The rule in relation to exercise perhaps sufficiently explains itself. So long as the patient has sufficient strength, he should take such exercise daily as will bring the whole voluntary muscular system into action. Walking, riding on horse-back, and

moderate manual labor in the open air, are the most reliable methods of exercise. The first case you have just examined, takes active exercise by walking every day; the second has too much shortness of breath to endure much walking, but might be greatly benefitted by riding in an open carriage. The third, however, is too feeble to leave his bed. To carry out the third rule requires a careful selection of such anodynes, sedatives, and tonics as are best suited to each individual case. In the early stage of the disease, while the tubercular deposit is still in its crude state, I find the majority of patients more benefited by the following remedies than any others that I have used:

R Fluid Ext. of Lettuce,      ℥j.  
 Fluid Ext. of Cimicifuga,      ℥j.

Mix. Give a teaspoonful before each meal and at bed-time, with five grains of Hypophosphite of Lime added to each dose when taken.

In such cases as are accompanied by passive hemorrhage, the Fluid Extract or Wine of Ergot may be substituted for the Cimicifuga with advantage. If the pulse is quick and the pulmonary organs very sensitive to atmospheric changes, much additional advantage will be derived by giving a wine-glassful of the infusion of *Lycopus Virginicus* or sweet Bugle half an hour after each meal. The same plan of treatment is also well adapted to some cases in the second stage of advancement. There is now in the Hospital a patient who was admitted three months since with all the symptoms of phthisis in its second stage. There was much emaciation, copious purulent expectoration, night sweats, and all the physical signs of softened tubercular disease in the upper lobes of both lungs. This patient has been kept upon substantially the same treatment as that just described. After the first six weeks the cough and expectoration began to diminish, and the latter has now ceased altogether. The hectic symptoms have also ceased, and the patient has gradually gained sufficient flesh and strength to enable him to walk about the city freely. Whether there is any truth in the theory of Dr. Churchill, or not, respecting the deficiency of phosphorous as an element in tubercular diseases, it is certain that the hypophosphites are among our best hæmo-



static tonics. Still, there are some patients, even in the early stage of phthisis, who do not seem to be benefited by them. Such is the first case to which I called your attention yesterday. Previous to his admission, I several times prescribed some one of these preparations for him. But under their use his cough and other symptoms of pulmonary irritation have uniformly increased. Hence I shall keep him pretty constantly on the use of the following mixture, viz :

R	Glycerine,	3 jss.
	Syrup of Iodide of Iron,	3 ss.
	Sulph. Morphine,	1 gr.

Mix, and give a teaspoonful before each meal and at bedtime.

He has also taken constantly the infusion of *Lycopus Virginicus* after meals.\* In all the advanced stages of the disease when the suppurative process is fully established, the expectoration copious, and the hectic rapidly wasting the patient, no medicine has done more in my hands to stay the progress of the disease and support the strength of the patient than this formula. Perhaps no remedy has been more generally used in the treatment of consumption during the last ten years than Cod-Liver Oil. From much observation, I have adopted the following rule for my own patients, viz : Whenever the patient can take at least three table-spoonfuls of the oil per day, without causing nausea or impairing the relish for food, it will pretty certainly prove beneficial. But unfortunately a large majority of tuberculous patients can take it but a short time before it disturbs the stomach, so much as to do more harm than good. In those cases where it is well borne, the improvement of the patient will be rendered much more certain by giving in conjunction with the oil, five grains each of hypophosphite of Lime and Dover's Powder three times a day. In favor of the use of alcoholic drinks in the treatment of phthisis I can say nothing. I have carefully watched their influence in connection with this disease for the last five years. They are worse than useless in counteracting the tuberculous diathesis, or preventing the deposit. In the active suppurative stage of the disease their free use will sometimes retard the emacia-

\* This patient now (March 28th, 1860,) is nearly free from cough or expectoration, and about his ordinary business.

tion, lessen the cough, and give a decided appearance of improvement. But it is in appearance only; for in most of such cases, while the disease of the lungs is apparently retarded, the retention of carbon in the blood hastens a fatty degeneration of the liver and kidneys, and develops dropsical effusions and albuminous urine.

Two such cases have called on me from country districts within the last three weeks. But as the clinique hour has expired, and I have previously fully discussed this subject in the lecture-room, I will not detain you longer this morning.

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CLINIQUE OF PROF. DAVIS, IN THE MEDICAL DEPARTMENT  
OF LIND UNIVERSITY. Saturday, March 24th, 1860.

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*Chronic Ague with Enlargement of Spleen.*—Case 1. Female child, aged 18 months. This child was first presented in the cliniques early in January last. It then presented a very bloodless appearance, with much emaciation. Its pulse was quick and feeble; skin cool; bowels a little inclined to be loose; and its appetite impaired. Its abdomen was much distended, partly by a very decided enlargement of the spleen, and partly by gaseous distension of the intestines.

The enlarged spleen could be easily traced by palpation and percussion. It had had regular paroxysms of intermittent fever, with only occasional short interruptions for several weeks previously. The treatment adopted consisted in the exhibition of Sulphate of Cinchonæ 1 gr. with Ferro-cyanide of Iron 1 gr. before each meal time, and a powder of Hydrarg. Cum Creta 1 gr., and Pulv. Doveri,  $\frac{1}{2}$  gr., every night.

No further chills occurred, and after the first four days had passed, the mercurial powder was omitted; but the Quinine and Iron have been continued with only slight interruptions until the commencement of last week. It now appears in very good health, having acquired a good degree of flesh and strength, and the evidences of splenic enlargement having disappeared. The patient was discharged without further treatment.

Case 2. *Asthma-Chronic Bronchitis.*—This patient, a native of Ireland, aged about 50 years, first came to the Dispensary about one week since. He had been afflicted for many

months with a severe harsh cough, and severe paroxysms of dyspnœa. For two weeks previous to his present visit, the cough and difficulty of breathing had been so severe each night that he had been wholly unable to lie down and sleep.

The expectoration was scanty and viscid; the skin cool; lips leaden color; and the dry bronchial rhonci easily recognized over both sides of the chest. The entire absence of febrile symptoms; the wheezing quality of the respiration; and the severe exacerbations of dyspnœa at night, plainly designated it as a case of asthma. For temporary relief at that time, he was advised to take a powder containing Pulv. Opii, 2 grs., and Tart. Ant. et Pot.  $\frac{1}{4}$  gr., each morning, noon and night. He has taken these powders during the week past, and with very much relief.

The attention of the class was called to the fact that asthma, like dropsy, is merely a symptom; which is generally dependent on some prior and perhaps remote pathological condition. Thus, one class of cases depend on organic disease of the heart; another on chronic inflammation of the bronchial mucous membrane; and another on a morbid condition of the respiratory nerves, inducing purely spasmodic action. The latter cases were distinguished by the suddenness and violence of the paroxysms, and the *entire relief* from all symptoms of respiratory disturbance in the intervals. The two former are to be diagnosed with certainty only by the aid of auscultation and percussion. Attention was called to the fact that in the present patient, there was constantly a shortness of breath, greatly increased by exercise; considerable cough, especially in the morning, with a tenacious opaque expectoration; and on applying the stethoscope there was on both sides a harsh and exaggerated inspiratory murmur, somewhat prolonged in expiration, but neither broncophony nor increased dulness on percussion. The rhythm and sounds of the heart were normal.

These symptoms and physical signs, existing at a time when the patient is entirely free from any special paroxysm of the asthmatic affection, are sufficient to show that the bronchial mucous membrane is thicker and more dry than natural, thereby lessening the capacity of the bronchial tubes, inducing short-

ness of breath, and rendering the sound produced by the ingress and egress of air harsher than natural. This state of the mucous membrane is doubtless the product of chronic inflammation. We often find similar changes in the respiratory murmur accompanying the early stage of the tubercular deposit, but this is readily distinguished by the addition of more or less broncophony and diminished resonance, symptoms that are absent in the present case.

After the students present had each made an examination of the patient with the stethoscope, the following prescriptions were made for the patient, viz :

R	Tinct. Cimicifuga Rac.	3jss.
	Tinct. Lobelia,	ss.
	Tinct. Opii et Camph.	3j.

Mix, and give a teaspoonful before each meal and at bed-time.

R	Pulv. Aloes,	20 grs.
	Sulph. Ferri,	20 grs.
	Pillulæ Hydrarg.	10 grs.
	Ext. Cannabis Ind.	20 grs.

Mix and divide into twenty pills. Take one pill at 8 o'clock each evening.

The patient was requested to return to the Dispensary on the next Saturday.

Case 3d.—*Chronic Bronchitis with Psoriasis*.—Male, aged 23 years, native of Ireland, laborer. This patient complained of a harsh bronchial cough, with soreness behind the sternum and in the epigastrium. He presented all the physical and rational signs of sub-acute bronchitis, resulting from a severe cold two weeks since. He also showed a well characterized patch of psoriasis on the outer part of the left arm, and a still larger patch on the leg. From the copper color of the cutaneous disease it was supposed to have some connection with a previous syphalitic influence. After explaining fully the diagnostic symptoms and nature of the cutaneous disease, the lecturer remarked that, if he was to prescribe for the bronchial affection alone, he should direct a simple anodyne and expectorant mixture, such as a combination of the Comp. Honey of Squills, Senega and Antimony, with the Camph. Tinct. of Opium. But as the present case was complicated with an

obstinate cutaneous disease, dependent, in part at least, on a specific influence, he would make the following prescriptions for the present, requesting the patient to return and report progress the following week, viz :

R	Fluid Ext. Lactuca Sat.	3 jss.
	Fluid Ext. Cinchonae,	3 jss.
	Bi Chloride Hydrarg.	1 gr.

Mix, and take a tea spoonful before each meal and at bed time, in a little sweetened water.

R	Iodide of Sulphur,	℥i.
	Simple Cerate,	3 jss.

Mix, thoroughly, and apply to the patches of cutaneous disease every night.

Two other cases were presented at the clinique, of which we had not time to make a memorandum.

#### CHICAGO ACADEMY OF MEDICAL SCIENCES.

(Reported for "Medical Examiner," by WALTER HAY, M. D., Sec'y.

This Academy assembled in their new rooms, No. Washington Street, and being called to order by the President, the proceedings of the last meeting were read, accepted, and ordered to be recorded. The Secretary read a report from the Council Committee appointed to make purchases of furniture and fittings for the new rooms, submitting therewith vouchers for moneys expended, which was also accepted and ordered on file.

Dr. Hamill read a paper upon Sulphate of Quinine and some of its effects.

Dr. Ingalls thought the remedy was usually given in too large doses, thereby proving a local irritant, and developing any latent typhoid tendency.

Dr. Hay agreed with the gentleman in recommending the use of small doses of quinine frequently repeated, in intermittents; did not consider it a local irritant.

Dr. Rauch did not believe quinine to be a local irritant, but

thought that it must necessarily be absorbed in order to produce its physiological effects.

Dr. O. Smith thought that the remedy in question must act by means of absorption upon the nervous system as a stimulant contracting the arteries, and increasing the fulness and hardness of the pulse.

Dr. Holmes asked for information regarding the efficacy of small doses, and the actual amount necessary to be administered.

Dr. Wickersham thought 14 to 16 grains the smallest quantity necessary to be introduced into the system in order to overcome an attack of intermittent.

Dr. McAllister related the treatment of two cases, illustrating the efficacy of small doses of quinine preceded by a mercurial cathartic, after large doses had proved inefficient.

Dr. Byford thought that in Dr. McAllister's cases above mentioned, much allowance was to be made for the influence of change of climate and season, and related a summary of the changes which had taken place in the mode of using quinine, during a period of twenty years within his experience; he considered the remedy to possess, in addition to its other qualities, diaphoretic properties, and favored its administration in large doses of three to five grains. He considered that the absence of uric acid in the urine to be attributable rather to the diminution in the waste of tissue than to defective elimination. He believed that quinine was an irritant relatively, frequently as much so in small as in large doses, and that its effects were generally too evanescent to prove injurious. He had seen no harm, nor any good result from its use in the treatment of typhoid fever, and believed, that in order to the production of its full therapeutic effect, a certain specific quantity was necessary to be introduced into the system, which quantity was only to be determined by experience.

Dr. Wickersham considered the remedy decidedly productive of injury to the brain when incautiously administered.

Dr. Rauch favored the administration of quinine in small doses, continued for a longer period of time, and thought that the changes in the mode of practice in different localities might



be accounted for by changes in the types of diseases. He believed that the remedy was useful in typhoid fever, as a tonic during convalescence, but at no other time during the continuance of that disease.

Dr. Chas. G. Smith considered quinine to be an anti-periodic simply, acting through the medium of the nervous system, and was as appropriate a remedy in one form of periodical disease as in another, hence its efficacy in neuralgia. He did not agree with Headland in his theory that it supplied a deficient element to the blood.

Dr. Bloodgood had commenced in the early portion of his career with the use of small doses of quinine, which he had found entirely successful. Some years afterwards, he, in common with other practitioners in the same locality, had found it necessary to increase the doses in order to produce the desired effect; did not believe the remedy a local irritant; did not approve of small doses, and always waited for a complete intermission before using it at all.

Dr. Graham strongly advocated the use of large doses of quinine; had seen many lives sacrificed by the too sparing use of that remedy. Considered it necessary to place the system thoroughly under its effects, and speedily, in the severer forms of intermittent, in order to insure the life of the patient.

Dr. Hamill had used Carbonate of Ammonia, and also Prussiate of Iron, in conjunction with a diminished portion of quinine, and found them valuable and efficacious substitutes for a portion of the usual quantity of the alkaloid used.

Dr. Ingalls inquired at what periods typhoid fever had been first observed in the West, and in what localities these observations had been made.

Dr. Byford had seen it first in Southern Indiana in 1843.

Dr. Ingalls in Central Illinois in 1847.

Dr. Rauch in Iowa in 1854.

Dr. Bevan had seen cases of typhoid fever fabricated by the abuse of quinine; did not believe that this agent ever originated or kept up intermittent fever, which idea he thought to be an error originating with Hahnemann and his followers.

The debate was continued by Drs. Bloodgood, Graham, Rauch, Orrin Smith, and Ingalls.

Dr. Hay's amendments to the By-Laws proposed at the last meeting were adopted *leviatim*, whereupon the Academy adjourned.

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### BOOK AND PAMPHLET NOTICES.

**A GUIDE TO THE PRACTICAL STUDY OF DISEASES OF THE EYE:** With an outline of their Medical and Operative Treatment. BY JAMES DIXON, F. R. C. S., Surgeon to the Royal London Ophthalmic Hospital, etc., etc. From the Second London Edition. Philadelphia: Lindsay & Blakiston. 1860.

This is the title to a small sized octavo volume of 427 pages. It is strictly an elementary treatise, or manual, and we think a very useful one. Its chapters are brief, but direct and practical; and their recommendations, so far at least as we have been able to examine them, judicious.

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**A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS.** BY FRANK HASTINGS HAMILTON, M. D., Prof of Snrgery in the University of Buffalo, etc., etc. Illustrated with 289 Wood Cuts. Philadelphia: Blanchard & Lea. 1860.

This is a large sized octavo volume of 757 pages; and is the most complete special work on Fractures and Dislocations accessible to the American profession. A more extended notice of its contents will be given in our next number.

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**CLINICAL LECTURES ON CERTAIN ACUTE DISEASES.** BY ROBERT BENTLEY TODD, M. D., F. R. S., Author of Lectures on Diseases of the Urinary Organs, etc., formerly Physician, now Consulting Physician to King's College Hospital, London. Philadelphia: Blanchard & Lea. 1860.

This is an octavo volume of 308 pages, occupied with fourteen Lectures; three of which are devoted to a consideration of Rheumatic Fever; two to Continued Fever; two to Erysipelas; one to Rheumatic Pericarditis and Endocarditis; one to Pyemia; four to Pneumonia; and one to the Therapeutical Action of

Alcohol. The general pathological and therapeutical doctrines advocated in the work, are distinctly shadowed forth in the following extract from the preface :

“ The design of the lectures published in the present volume, is to describe and illustrate by examples the clinical history and treatment of the more important acute diseases.

There will (the author believes) be found in the following pages evidence enough to show that the ordinary so-called anti-phlogistic treatment is unnecessary (to say the least) for the cure of acute internal inflammations ; and that the supposed necessity for such treatment rested upon an untenable hypothesis respecting the nature of inflammation and of fevers, and cannot be regarded as a legitimate induction from accurately observed clinical facts.

The conclusions, which the clinical observations detailed in the lectures tend more or less to establish, may be summed up in the following propositions :—

1. That the notion so long prevalent in the schools, that acute disease can be prevented or cured by means which depress and reduce vital and nervous power, is altogether fallacious.

2. That acute disease is not curable by the direct influence of any form of drug or any known remedial agent, excepting when it is capable of acting as an antidote, or of neutralizing a poison, on the presence of which in the system the disease may depend (*materies morbi*).

3. That disease is cured by natural processes, to promote which, in their full vigor, vital power must be upheld. Remedies, whether in the shape of drugs, which exercise a special physiological influence on the system, or in whatever form, are useful only so far as they may excite, assist, or promote these natural curative processes.

4. That it should be the aim of the physician (after he has sedulously studied the clinical history of disease, and made him self master of its diagnosis), to inquire minutely into the intimate nature of these curative processes—their physiology, so to speak ; to discover the best means of assisting them, to search for antidotes to morbid poisons, and to ascertain the best and most convenient methods of upholding vital power.

If one may venture a suggestion respecting the future of pathology, and of practice founded on it, it would be that a time is not far distant when all men who practice medicine in a scientific spirit, and divested of all the trammels of routine, will discard the distinction of acute inflammations and acute disease in general, into *asthenic* and *sthenic*—that all these maladies will be regarded as more or less asthenic, and as promoting more or less an undue waste of tissue, and that, in treatment, an object of primary importance will be the early adoption of means to uphold vital power, and the watchful and continued use of them throughout the duration of the case."

These propositions contain some truisms, some sophisms, and some glaring errors. For instance, the assertion that "disease is cured by natural processes," is a mere truism; for certainly it could not be cured by *unnatural* processes. Again, the assertion that remedies "are useful only so far as they excite, assist, or promote these natural curative processes" is purely sophistical; and when analyzed, amounts simply to the assertion that a remedy to act as such in the treatment of disease, must be capable of influencing in some way the natural curative processes capable of occurring in the animal economy. The second proposition quoted is entirely erroneous, as the author himself fully proves before he gets through his second lecture. Thus, on page 45, when speaking of the treatment of rheumatic fever, he says: "The seventh and last mode of treatment that I shall mention to you, is that which you have seen me adopt frequently at this Hospital, namely, *the treatment by elimination*. I give it this name in order that you may keep well in view its main object—to promote the *elimination* of morbid matter by the various emunctories, etc." Again, on page 47, he says: "You perceive that all the means employed in this mode of treatment *tend to elimination*, and to the relief of pain; the opiate sudorific affecting the skin; the nitre and alkaline salts acting on the kidneys; the purgatives on the mucous membrane of the bowels; the wool and blisters on the joints." Now, inasmuch as this mode of treatment is the favorite one of the author, and he has reported numerous cases "cured" by it, without claiming that a single one of the remedies employed acted

either as an "antidote," or as a "neutralizer of poison," we need go no further to prove the entire fallacy of his second proposition.

For what more "*direct influence*" can a remedy exert than that of a sudorific on the skin, a diuretic on the kidneys, or a cathartic on the bowels? Yet no one will pretend, that causing a direct *elimination* of morbid material, is either *antidoting* or *neutralizing* it. The first proposition we have quoted, declaring the notion that acute diseases are "cured by means which depress and reduce vital and nervous power," to be "altogether fallacious;" and the first clause of the third proposition, claiming that to promote the cure of disease by natural processes, "*vital power* must be upheld," affords a key to the whole book. Indeed they present the fundamental idea which the several lectures are simply designed to amplify and illustrate. In seeking for the exact meaning which the author intends to convey by *means* that depress *vital* power, we readily find that they are such as have long been included under the general term, *antiphlogistic* measures. And he expresses his decided belief, that the lectures contained in this volume, embody sufficient evidence to show that these means are "unnecessary for the cure of acute internal inflammations." On the other hand, the means for *upholding vital power*, are food, tonics, and so-called stimulants, of which alcohol is the chief. In conformity with these ideas, he plainly indicates his belief that all acute diseases are *asthenic* in their nature; and that "alcohol, in some form or other, is a remedy whose value can scarcely be over-estimated, and one upon which, when carefully administered, he relies with the utmost confidence in a great number of cases of disease which are at all amenable to treatment."

Such is a brief, but true statement of the doctrines of the learned and distinguished author of these lectures. Their importance, as indicating the present tendencies of a highly respectable portion of the professional mind, render them worthy of a careful examination. This we have neither space nor time to do at present. We will not leave the subject, however, without asking a few questions for the consideration of our readers.

1st. Are these doctrines true? Are the acute phlegmasia always *asthenic* in their nature? When we come to a patient with a florid flush in the face; a hot skin; hurried respiration; a full, strong, firm pulse; acute pain in the side, head, or joints; and acuteness of sensibility generally, are we to credit the evidence of our senses, and call it a case of active *sthenic* disease; or shall we ignore the evidence of our own senses, together with the clinical observations of the most extensive practitioners since the days of Hippocrates, and place such a case in the same category with one presenting a dingy flush on the face; a soft, compressible and frequent pulse; dull pain; and dulness of mental action? If the latter, then we might as well abandon all idea of making practical distinctions at the bed-side of the living patient. That most of the diseases seen by Dr. Todd during his long and honored service in King's College Hospital, have been *asthenic*, we have no doubt. But is he quite safe in considering the specific character of diseases in a London Hospital as fairly representing the character of disease everywhere? During the ten years that we have been connected with the Mercy Hospital of this city, we have not met with more than two or three of its inmates who presented such symptoms of an active *sthenic* condition, as to require the use of venesection or strong sedatives. But during the ten years that we practiced medicine in a rugged, hilly district in the interior of New York, we seldom met with a well marked case of pleurisy, pneumonia, arachnitis, or acute rheumatism, in the treatment of which, depletion and sedatives could be omitted without jeopardizing the life of the patient. Have our senses and the results of our practice alike deceived us all through life? Or can we rely on it as a settled fact in pathology, that the specific or particular character of diseases vary with the variations of locality, climate, season, temperament, and other circumstances attendant on their development?

The reader of the volume before us would be more likely to adopt the theories of its author, if the treatment of disease recommended in it was more consistent with such theories. For while the author intimates that all acute diseases are *asthenic*, and that the idea of curing them by antiphlogistic



means is entirely fallacious, he treats the very first disease chosen to illustrate his pathological views, with anodyne sudorifics, diuretics, and purgatives; remedies which have certainly been ranked as antiphlogistic since the days of Hippocrates. And if sweating, diuresis and purging are not positively depletive, it is quite time that we altered the whole phraseology of our *Materia Medica*.

2. What does our author mean by "*Vital Power*"? Is it the *vis anima* or *vis vitæ* of the older writers? Is it the *vis medicatrix naturæ* of the modern? Or is it an undefined shadowy something that rules like a presiding genius over the various organic movements and functions of the human system? We fully agree with Dr. Todd, that the prevalent doctrines of pathology and therapeutics, should be carefully reviewed: and we think one of the first and most important objects of such review should be, either to expunge from our literature, or definitely define all such words and phrases as *vital power*, *vital force*, *nervous force*, *vis medicatrix*, and others used to conceal ignorance, or to express ideas too vague to be understood. If the pathologist tells us that the blood is capable of being altered in the relative proportion of its constituents, or may have new matters introduced into it, thereby causing diseases which are to be cured by remedies that either increase the deficient constituents, or neutralize or expel the foreign matters, we can understand fully his meaning. If he tells us that all living organized structures necessarily possess a *property* by which the primary cells, or particles of which they are composed, are made to assume a certain definite relation to each other, and which property he calls *vital affinity*, we can understand readily his meaning. If he tells us that all living organized matter possesses another property, by which it is rendered capable of being acted upon by exterior agents, and which he calls *susceptibility*, we can attach a well defined idea to his language. If he goes further, and informs us that every structure has its elementary function, such as secretion for the secreting cells; contraction for the muscular structure; sensibility and transmissibility for the nervous, etc., he can be understood. If he tells us that any one of these properties or

elementary functions, separately, or all of them unitedly, may be increased, diminished, or perverted, constituting elementary forms of morbid action, out of which the complex phenomena of disease are developed; and that curative measures must be sought in such agents as will depress these properties and functions when excited; increase them when depressed; or correct them when perverted, we can comprehend the meaning of his language, and grasp clearly the ideas he wishes to convey. But when he talks of sustaining or depressing *vital power*, or nervous power, or the *vis medicatrix naturæ*, we will not say he talks nonsense; but he certainly talks of something very imperfectly defined.

2. What are the *natural curative processes*?

Within a few years past, much has been written by Drs. Forbes, Bigelow, and their disciples, about the "natural curative processes," "nature in the cure of disease," etc. We are gravely assured that it is the office of the physician *not to cure* disease, but only to *aid nature* in affecting a cure.

It is very easy to sit down at ones desk and magnify the sanitary powers of dame nature; and write many pretty things about her wonderful accomplishments. But after all, we are very much inclined to think that it would be far more satisfactory to the anxious, toiling practitioner, at the bed-side of his patient, to be informed definitely what *nature* is? What the *natural curative processes*? And by what means they can be most readily influenced in any given direction.

We seldom read anything on this subject without thinking of a discussion in a Medical Society, to which we had the pleasure of listening. The subject under consideration was the treatment of an acute and serious disease. One member rose and said that he considered the disease as specific in its nature, destined to run a given course, and seldom or never needed any treatment at all; and expressed his very decided conviction that if every case was left entirely to good nursing, the ratio of mortality from the disease would be very much less. He likened the disease to an engine running on a Rail Road track, and the business of the physician was simply to keep the *track clear*. When questioned, however, in relation to the liability

of having obstructions on the track, and the best means for their removal, he enumerated under the first head almost all the consequences or important morbid developments of the disease, and under the latter an array of medicinal agents more numerous and active than we had even thought of using in the same form of disease. Would not the comparison have been better if the Doctor had made the engine represent *nature*, or more properly, the living, healthy human system, and the obstruction on the track, the disease? For what is disease but a deviation from health, an obstruction to the healthy performance of one or more of the natural processes and functions of the system? And in what does the cure of disease consist, except in the removal of such obstructions or deviations from healthy action?

We had intended to notice the last lecture in this volume, which discusses the therapeutic relations of alcohol; and which we think presents many important errors. But we have occupied very much more space than usual already, and consequently will not pursue the subject further at present.

All the above-named works were received from the publishers, through the extensive Book Establishment of S. C. Griggs & Co., of this city.

We have also received from the Author, a volume entitled "Mal-practice and Medical Evidence," which will be noticed in our next issue.

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## SELECTIONS.

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*Goitre successfully treated by large doses of Bromide of Potassium and Liquor Potassæ.*—Cases of goitre, and especially those of long standing, are some of the most troublesome and unsatisfactory that fall under the notice of practitioners. In many of them, even where treatment has been successful for a time, it sometimes happens that from very trifling exciting causes the gland enlarges to as great a size as ever. During the past year we had the opportunity of seeing over a dozen

examples of goitre, under Dr. O'Conner's care at the Royal Free Hospital. In a few of those cases, iodide of potassium, in small doses, gradually increased to larger ones, with the external application of strong iodine paint, was tried without benefit. The same remedies in combination with steel, and generous living, were equally unsuccessful. Bromide of potassium, in doses of five grains, with ten minims of liquor potassæ in infusion of quassia, was next tried, and continued for some time, with benefit, the bromide being gradually increased to doses of twenty-five grains, three times a day, with forty minims of liquor potassæ. In all the instances in which it was given for a proper length of time, the result was a complete disappearance of the glandular enlargement. The minimum dose of the bromide now administered in these cases by Dr. O'Conner is ten grains, with twenty minims of liquor potassæ and infusion of quassia. There are now three patients under treatment in whom the progressively beneficial effects of this remedy are clearly discernible. In many of these cases strong iodine paint is used as an application. We have heard Dr. O'Conner state, that the bromide of potassium does not produce any of the depressing effects of the iodide, which is a practical point of very great importance.—*London Lancet.*

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*Turpentine in Hæmoptysis.*—There are several well-known remedies which justly enjoy a high reputation for arresting attacks of hæmoptysis, and amongst them may be mentioned acetate of lead, gallic acid, and dilute sulphuric acid. These we see commonly employed, and almost invariably with success. From some cause or other, however, they will sometimes fail, and our reliance must be placed upon some other astringent and styptic, which shall have the power of effectually checking this slow form of bleeding from the lungs. The oil of turpentine is, perhaps, one of the best next to those we have mentioned, and when properly administered can be relied upon. We lately observed two cases of hæmoptysis in the Charing-cross Hospital, under Willshire's care, which continued obstinately persistent, in spite of the free use of acetate of lead firstly, then gallic acid, and thirdly dilute sulphuric acid. One patient was a young man aged twenty-one years, who has had several recurring attacks of this symptom; he was admitted on the 28th of November. The hæmorrhage was stopped only when the oil of turpentine was administered in doses of twenty-five drops three times a day in a little syrup and water.

The other patient was a female, at first in the surgical wards under Mr. Hancock's care; she had had a breast amputated, which was followed by intense congestion of the lungs, with hæmorrhage. She was now transferred to Dr. Willshire's care, and after taking the other remedies in full doses without effect, the turpentine completely controlled the bleeding, and she is gradually improving.

The efficacy of turpentine is well-known in hæmorrhages from the urinary passages, and also from the uterus,—that is to say in their passive form; and as it exerts a specific and peculiar influence upon mucous surfaces generally, we may look for good results in other parts of the body, of which the bronchi are most certainly not the least important.—*London Lancet.*

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*Hernia Testis from Strumous Deposit. Partial removal: Cure.*—The strumous diathesis is one of the most unfavorable complications under which inflammatory affections of the testicle can occur. A blow on the testicle, which, in a healthy individual, excites only transient or trifling orchitis, will, in a strumous constitution, light up chronic disease, accompanied by enduring enlargement and strumous deposit; frequently at a latter stage this strumous matter breaks down, abscess forms, and hernia testis in its most troublesome aspect is the result.

Of this form of the disease the following case afforded a good type:—J. A—, aged forty-five, was admitted into St. Mary's Hospital, under the care of Mr. Coulson, having the scrotum greatly enlarged, and swollen to the size of a shaddock, tense and elastic to the touch. From an aperture on the right side, the corresponding testis protruded, forming a shining, irregular mass, of the size of a walnut, adherent to the surface of the scrotum. The disease dated from a sharp blow received six month's previously, subsequent to which occurrence there were pain and swelling to a considerable degree; this subsided almost wholly under appropriate medical treatment; the scrotum had never resumed its former size, but remained somewhat large and indurate. Four weeks before admission, the swelling gradually increased, and about a week before, the skin gave way, and the testicle came into view. Mr. Coulson made two punctures in the scrotum in order to evacuate its fluid contents, and employed compression and suspension. Under this treatment the swelling greatly diminished; but the protrusion of the testis persisted. He determined, therefore, to perform ablation

of the fungoid portion of the testis, and to return the remaining part. He proceeded to dissect the testis from the scrotum, enlarged by upward and downward incisions the aperture of protrusion, removed that part of the testis which was infiltrated with strumous deposit, and returned the healthy portion into the scrotum; bringing, then, the clean edges of the wound together by many points of suture. The patient did perfectly well for some days. A sharp attack of erysipelas then ensued; the scrotum, groin, and perinæum were inflamed; the wound gaped, and the testis protruded: the scrotum became hard and thickened, and the skin livid. Under appropriate treatment, however, the erysipelatous inflammation subsided. Mr. Coulson then employed tonics, and a lotion of five grains of nitrate of silver to one ounce of lime water. Under this treatment the scrotum contracted around the testis, so that when cicatrization was completed, and the parts had healed, the testis was completely covered, and the man was discharged cured.

On the 1st inst., we were present at the London Hospital, when Mr. Curling dissected the skin around a benign fungus of the testicle in a colored man, and brought it over the protruding mass, which comprised nearly the whole of the testicle. This was the result of chronic orchitis, but the bulk of the tumor had become diminished through absorption from the internal use of the iodide of potassium.—*London Lancet.*

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*Elevation of the Subclavian Artery above the Clavicle, in a Phthisical Patient.*—There are many circumstances which influence the position of the subclavian artery in the neck; and according to its elevation on a level with or even above the clavicle, so can it readily be tied when necessity demands such a proceeding at the hands of the surgeon. As we are in the habit of encountering this vessel clinically, it is usually situated below or at any rate not higher than the level of the clavicle; its deviation from this, however, is a fact worthy of note and of record. On a reference to Mr. Quain's great work on the Arteries, we find the relative position of the artery and clavicle noted in 25 cases, and the results were as follows:—the artery was not higher than the clavicle in 6; was slightly higher in 11; was half an inch and not exceeding one inch higher in 4. and more than one inch and not exceeding one inch and a half in 4. As may be imagined, the position of the shoulders and the development of the tissues materially influence the position of the artery. It is very possible in lean subjects with long and slender necks, that the artery may oftner rise above the clavicle than we are aware of.



We had the opportunity lately of examining a phthisical patient in St. Bartholomew's Hospital, under Dr. Farre's care, who is much emaciated from his disease, there being already a cavity under his right collar bone, with pectoriloquy and all the usual physical signs of phthisis. His age is thirty-nine, and the disease has existed twelve months, with occasional attacks of hæmoptysis, as we learn from Mr. Schollick, Dr. Farre's clinical clerk. The subclavian artery can be felt almost subcutaneously beating much above the clavicle, and very slight pressure causes pain. There is irritability of the muscles of the neck, and he has much laryngeal irritation as well, possibly ulceration of his mucuous membrane in some part of the larynx below the vocal cords—we say below because the voice as yet is not materially affected. His uvula was elongated, but truncation afforded considerable relief. There is no similar elevation of the subclavian of the left side, which is perhaps peculiar, but possibly depending upon the absence of extensive disease of the lung. The relative position of the important artery and the clavicle is of some value clinically, and has not hitherto attracted much attention, at least among physicians. We are the more anxious, therefore, to bring it before the notice of our readers, and shall not fail to record any well-marked instances of it similar to this case. The patient in the present instance has a pigeon shaped chest, and his clavicles seem depressed.—*London Lancet.*

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*Enchondroma of the big toe for twenty years.*—The growth of enchondromatous or cartilaginous tumour is usually slow; but the period of time varies much, from a few to many years. They are common enough about the hands, but not so much so on the feet.

On the 22nd ult., Mr. Hilton removed from a woman a tumour of this kind, as large as a walnut, which had been slowly growing on the inner surface of the left great toe for the period of twenty years. It recurred after the removal, at that time, of a probably similar tumour, and on the present occasion did not involve the phalanx. She had experienced no pain, and her general health was good; but the position of the growth now and then caused much inconvenience. It proved to be pure enchondroma, without any mixture of bony material, and since the operation the patient has gone on well without a bad symptom. In certain instances similar tumours have increased very rapidly within a few months, but, as a rule, their growth is tardy.—*London Lancet.*

*Severe Burn of the Neck, treated by extension from the beginning.*—On the 8th inst., a little girl, about nine years old was given chloroform at Guy's Hospital, and an effort was made by Mr. Hilton to flex her right arm, which had become ankylosed in consequence of a severe burn some two years ago. All his efforts were fruitless, because the union was now bony and extremely firm. Her case otherwise was a very remarkable and interesting one, from the fact of her complete recovery from a terrible burn of the whole anterior part of the neck and upper part of the chest, sustained two years ago, without the least deformity whatsoever.

When admitted into Guy's after the accident, the destruction of the skin was so extensive that the pectoral and some of the muscles of the neck were exposed, and the burn extended on-wards to the right arm and forearm, whilst it occupied each side of the neck, involving the external surfaces of both of her ears. She was retained in bed for six months; her head and neck were kept perfectly quiet, and the latter was maintained in an extended position by means of a small bag of sand placed at the back of it. She was allowed, however, to sit up to her meals. When she left her bed she wore a stock, which greatly elevated the chin; from its lower part were attached two cushions, which pressed over the upper part of the chest, and permitted a free motion, with an utter absence of deformity. The thin cicatrix glides with perfect ease over all the subjacent parts. This stock is to be continued for a sufficient time, to prevent all tendency to contraction. It is one of the most satisfactory cases of the kind in regard to the treatment, considering the extent and severity of the burn, which we ever remember to have witnessed.

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*Elephantiasis of the Clitoris.*—A well marked example of this curious disease, spreading to the surrounding labia and nymphæ, was recently admitted into St. George's Hospital. The patient was an elderly woman, who underwent an operation three years ago for the removal of the same sort of disease, but it had not now returned in the old cicatrix. It formed a considerable sized tumor of the organ in question, was pendulous, and divided into a series of lobes by numerous fringe-like processes. She was placed under the influence of chloroform, and its removal was effected by means of a double ligature through its pedicle, and then cutting it off. This totally prevented any hemorrhage, which Mr. Tatum observed was some times very considerable in such cases. The patient is doing well, but much disease remains in the labia and nymphæ, the cellular tissue of which is very liable to take on the same hypertrophic action of a later period.

## EDITORIAL.

FIRST ANNUAL COMMENCEMENT OF MEDICAL DEPARTMENT  
OF LIND UNIVERSITY.

According to previous notice, the Public Commencement of this new Medical Institution, was held on the evening of March 5th, 1860, in the Second Presbyterian Church.

At the hour appointed, the Church was well filled with citizens, embracing many professional men, and friends of education generally. The exercises commenced with prayer, by the Rev. Dr. Patterson, after which the candidates for graduation were called upon the platform, when Mr. J. S. Jewell, one of their number, delivered a very appropriate and interesting farewell address in behalf of the students. The President of the Faculty then announced the award of a premium to Rufus D. Cogswell, of Illinois, for the best Inaugural Thesis, and another to A. D. Andrews, of Wisconsin, for the second best Thesis. Prof. H. A. Johnson, on behalf of the Board of Trustees, conferred the Degree of Doctor of Medicine on the following gentlemen :

C. DeHaven Jones, of Evanston, Illinois.

John Conant, of Rockford, Illinois.

J. S. Jewell, of Attilla, Illinois.

Rufus D. Cogswell, of Wilmington, Illinois.

Lucien Ashley, of Magnolia, Illinois.

Thos. J. Rigg, of Chicago, Illinois.

J. F. Hopkins, of Milwaukee, Wisconsin.

A. D. Andrews, of River Falls, Wisconsin.

J. M. Kendall, of Wabash, Indiana.

The *ad eundem* degree was conferred on Drs. Edward C. Dickinson and Ezra A. Steele, both of Chicago, Illinois. After the conferring of the Degrees, Titus Deville, M. D., Professor of Anatomy in the University, announced his intention of returning to Europe, and delivered to the Faculty, Graduates and Students, a very appropriate and eloquent farewell address.

The regular Valedictory Address to the Graduates, was given by Prof. H. A. Johnson, on the qualifications of the true physician. The theme was presented in its most comprehen-

sive aspect; embracing the physical, intellectual, and moral qualities necessary for the attainment of a just eminence in the medical profession. The several topics were admirably arranged; the illustrations and comparisons were chosen with that nice discrimination for which the speaker is justly celebrated; and the whole was clothed in language as pure and classic as it was eloquent and stirring. It was received by the audience and class with marked attention and pleasure.

The exercises in the Church were closed with a benediction: and the Trustees, Faculty, Graduates, Students, and invited guests, retired to the residence of Prof. N. S. Davis, where they partook of an entertainment in honor of the graduates, and spent two or three hours in the most pleasant social and intellectual enjoyment.

As an evidence of the latter (the intellectual) part of the entertainment, we append the sentiments offered, and the names of the respondents to each.

By Dr. J. F. Hopkins: "The *Lind University*, with a foundation as broad as the liberality of its *chief almoner*, and as stable as the pillars of virtue; her Medical Department is plainly destined to be the great centre of medical science and instruction in the North-West." Responded to by S. Lind, B. W. Raymond, and Rev. Mr. Spencer.

By Dr. A. D. Andrews: "The *Faculty* of the Medical Department of the Lind University, neither corroded by the rust of old fogysm, nor soured by "green-eyed jealousy," nor blinded by an over-zealous spirit of reform, but genuine advocates of *rational improvements*, may their success be equal to their talents and their virtues." Responded to by Professors Byford, Hollister, and Taylor.

By Dr. C. D. Jones: "The *Senior Professor* of the *Senior Department*, Prof. Davis—the founder of the American Medical Association, and the personification of indomitable energy—may the throbbings of his generous heart meet a cordial response from the profession at large, and he live to realize his highest ambition." Responded to by Prof. Davis; who in concluding his remarks, gave in return a sentiment to the *Senior Class*, which called out a very appropriate reply in their behalf from Dr. Jones.

By Dr. J. M. Kendall: "The *Senior* Professor of the Junior Department, Prof. H. A. Johnson—self-made and self-reliant; an example worthy of imitation. May the sentiments he has uttered find a lodgement in prolific minds, that will prove lasting monuments to perpetuate his name." Responded to by Prof. Johnson, who in return gave a sentiment to the *Junior Class*; which called out a very humorous and pleasant reply from Mr. Webber of that department.

By Dr. J. F. Hopkins: "Prof. E. Andrews, the accomplished and energetic Surgeon of the North-West." Responded to by Prof. Andrews.

By Dr. R. D. Cogswell: "Our *emeritus* Professor of Obstetrics, Dr. David Rutter, honored and revered by all who know him; may we never forget the good council he has given us."

By Dr. Hopkins: "Our esteemed *Hostess*, Mrs. Dr. Davis, one of the *true-hearted women of America*. We shall ever think of her as our memories linger around this festive scene. May she long live an ornament to society." Responded to by Prof. Spafford.

Throughout the evening everything was done in admirable order, and it was altogether the most interesting and pleasant college commencement we ever attended.

Immediately after the close of the regular annual college term, the Medical Faculty of the University arranged a course of summer instruction for those students who should remain in the city. A good text-book in each department of medical science was selected, and the student required to undergo a regular examination in each, accompanied by a familiar explanatory lecture once a week. By this arrangement the student gets one thorough examination in some branch every day. The dissecting room has also been kept open and supplied with *material*, under the charge of the Demonstrator. In addition to this course of systematic reading, examinations and dissections, they have one hour of clinical instruction every day by Professors Andrews and Davis, viz: On Mondays, Tuesdays, Thursdays and Fridays, in the Mercy Hospital, and on Wednesday and Saturday in the City Dispensary, at the University rooms.

Thus, the division of the regular College term into Junior and Senior Departments, adapted to the systematic and progressive advancement of the students; the lengthening of the term in both, to *five* months; the more comprehensive presentation of the whole field of medical science and art by the divided term, and the increased number of Professors; and the continuance of the examinations, demonstrations, and clinical instruction, throughout the entire summer, from the close of one term to the commencement of the next; makes up a system of medical instruction for the Medical Department of Lind University, more comprehensive in its scope; more accurately adjusted in its details to the wants of the student in the successive steps of his pupilage; and more continuous, than is afforded by any other institution with which we are acquainted, in America.

The course of summer instruction is now in active progress, and regularly attended by a class of good students.

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#### ILLINOIS STATE MEDICAL SOCIETY.

We are assured by Dr. S. York, that the profession and citizens of Paris, have made ample arrangements to entertain hospitably all the members of the State Society who will attend the coming meeting on the second Tuesday in May next.

We hope there will be a full attendance from all parts of the State.

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#### DELEGATES TO THE STATE SOCIETY.

The Chicago Academy of Medical Sciences appointed the following delegates to the State Society, viz: S. C. Blake, Chas. G. Smith, Thomas Bevan, and J. H. Rauch.

The Chicago Medical Society, at its last annual meeting, appointed the following officers:

*President*—Orrin Smith, M. D.

*Vice President*—L. P. Cheeney, M. D.

*Secretary*—J. Swayne Wickersham, M. D.